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**Fiordland Trails Trust**

**Leg 6 of the Lake 2 Lake Trail**

**Resource Consent Application**

**Diversion of Surface Water, Diversion of Ground Water and  
Wetland Modification**

## Contact Details

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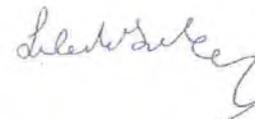
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**APPLICATION FOR RESOURCE CONSENT  
PURSUANT TO SECTION 88 OF THE RESOURCE MANAGEMENT ACT 1991**

To: Environment Southland  
Private Bag 90116  
INVERCARGILL 9840

From: Fiordland Trails Trust

Completed Southland Regional Council Forms A & B are attached as Appendix F.

**Fiordland Trails Trust** applies for the following resource consents:

1. The type of Resource Consent sought is:

RMA Section	Resource Consent Sought	Period Sought
Section 14	The diversion of surface water and groundwater	25 years
Section 9	Wetland modification	N/A

2. The application should be read alongside the application for wetland modification (application APP-2019-1150) and seeks resource consent for wetland modification (land use activity) associated with installation of the proposed third culvert and a discharge consent for the diversion of water through the proposed third culvert to the downstream side of the Trail. The application seeks resource consent for the diversion of both groundwater and surface water. The reason for this being that the installation of the culvert will divert groundwater or surface water or potentially a combination of both.
3. The property details for the application site are listed below:
- Leg 6 of the Lake 2 Lake Cycle Trail between chainage 2200 and 2300.
  - GPS Coordinates 1180612 E, N4942051 and 1180593 E, 4942084.
4. The location of the activity is detailed in the attached report and appendices.
5. The properties the application relates to are owned by: The Crown.
6. Other resource consents: An application (APP-2019-1150) for wetland modification has been made and is currently being processed by the Southland Regional Council.
7. Attached in accordance with the Fourth Schedule of the Resource Management Act 1991 is a description of the proposed activity and an assessment of the environmental effects the proposed activity may have on the environment.
8. Included is an assessment of the proposed activity against the matters set out in Part 2 of the Resource Management Act 1991.
9. I attach an assessment of the proposed activity against any relevant provisions of a document referred to in Section 104(1)(b) of the Resource Management Act 1991, including the information required by Clause 2(2) of Schedule 4 of that Act.

10. Nothing in this application is affected by section 165ZH(1)(c) of the Resource Management Act 1991 (which relates to marine and coastal occupation).
11. The proposed activity is NOT within an area covered by a customary marine title group planning document under Section 85 of the Marine and Coastal Area (Takutai Moana) Act 2011.
12. The application is NOT for any form of subdivision under the Act.
13. Information, as required by the relevant Regional Plan is contained in the attached document.
14. Attached is all other information required to be included in the application by the relevant Regional Plans, the Resource Management Act 1991 or any regulations made under that Act.
15. All information provided in this application is true and correct to the best of the applicant's and report writer's knowledge and understanding.
16. The relevant application fee was paid on lodgement of the application. The applicant will pay all actual and reasonable application processing costs incurred by the Council.
17. We request that all correspondence about this application be directed towards our Agent.

**Fiordland Trails Trust**

Address for Service:  
Opus International Consultants Ltd  
PO Box 647  
INVERCARGILL

ATTENTION: Luke McSoriley  
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## 1 Introduction

This application has been prepared in accordance with Section 88 of the Resource Management Act 1991 (RMA) and provides a description of the proposal with an assessment of the actual and potential effects on the environment, as required by the Fourth Schedule of the RMA.

## 2 Background

### 2.1 Fiordland Trails Trust

The Fiordland Trails Trust (FTT) is a charitable trust constructing a multiuse trail from Te Anau to Manapouri known as the Lake 2 Lake Trail (the Trail). The Trail runs along the true left (East) side of the upper Waiau River and is formed of 6 legs; five of which (Legs 1 – 4 and Leg 6) have been constructed.

### 2.2 Wetland Modification Application

In September 2018 Environment Southland issued an abatement notice relating to encroachment of part of Leg 6 of the Trail across a wetland for a length of approximately 35m. Wetland modification requires resource consent under the Proposed Southland Water and Land Plan (pSWLP). In response to the abatement notice the FTT retrospectively lodged an application seeking resource consent for wetland modification.

The construction of a part of Leg 6 of the Trail, approximately 35 metres in length, has resulted in encroachment on a wetland associated with a spring fed stream that drains into Lake Manapouri. The resource consent application seeks retrospective resource consent for wetland modification associated with construction of this section of the Trail (the use of land within a wetland).

An application (APP-2019-1150) for wetland modification (the use of land within a wetland) associated with a 35m section of the Trail is currently being processed by the Southland Regional Council (SRC). A decision to process the application on a publicly notified basis was made by Environment Southland under section 95 of the Act on the 18 April 2019. At the close of the public notification process a total of 73 submissions has been received, 71 submissions in support and 2 neutral. No submissions opposing the application were received. A hearing was scheduled to take place on the 18<sup>th</sup> September

While preparing ecology evidence for the hearing it was determined that evidence from an expert hydrologist should be obtained to ensure all relevant effects were adequately addressed. This resulted in FTT engaging David Hamilton a Senior Water Resources Engineer to review the hydrological aspects of the application. Mr Hamilton's assessment is included as Appendix 2.

Mr Hamilton recommended, in addition to the two culverts proposed as part of the application, a third culvert be installed to mitigate any effects on the interflow of groundwater through the upper top soil layer between the upstream and downstream sides of the Trail. It is proposed to locate the third culvert near the middle of the wetland crossing as detailed in Appendix 1.

A water permit is required for the diversion of water through the proposed third culvert to the downstream side of the Trail. Water permits were not required for the two culverts proposed as part of the first application because they are located within an existing overland flow path and transport water that would otherwise flow along an existing channel were it not for the construction of the trail. Land use consent is also sought for modification of the wetland for the purposes on installing the third culvert.

## 2.3 Site Description

The land subject to this application is the part of Leg 6 of the Trail that crosses a wetland over a length of approximately 35 metres. The Trail in the locality crosses two streams that are spanned with polyethylene culverts (the northern and southern culverts). The streams define the wetland extent. The Trail has been formed to a width of 3.0 metres incorporating a 2.2-metre-wide gravelled surface and steep gravelled shoulders. A water table has been formed on part of the upstream side of the Trail to direct sub-surface flows from the wetland to the southern culvert. A detailed description of the wetland is provided in the ecological assessment (Appendix A). The part of the Trail that this application relates to is located between chainage 2200 and 2300 of Leg 6 - Manapouri to Supply Bay Road.

## 3 Proposed Activity

This application seeks resource consent for wetland modification (land use activity) associated with installation of a culvert and a discharge consent for the diversion of water through the proposed third culvert to the downstream side of the Trail. The application seeks resource consent for the diversion of both groundwater and surface water. The reason for this being that the installation of the culvert may be undertaken in a manner that involves diversion of groundwater or surface water or potentially a combination of both. A methodology for the proposed culvert works is detailed below.

## 4 Works Methodology

A 4m long x 400mm diameter polyethylene culvert will be installed at a location approximately 12 metres to the north of the southernmost 800mm diameter culvert as directed by the Engineer.

### 1. Excavation

- The trench shall be 600mm wide +/- 50mm.
- Trail pavement material shall be set aside on the trail for later reinstatement.
- Natural substrate material as excavated shall be set aside on the existing trail for later placement to the water table filling.
- The excavation shall proceed from downstream to upstream.
- All care shall be taken to prevent silt laden water flowing to the wetland.

### 2. Placement

- The pipe shall be embedded in compliance with Rule 59(a) of the pSWLP to a depth of 1/3 of the culvert dia. (135mm) into the natural bed.
- The culvert shall be backfilled with granular material and well compacted.
- Minimum gradient to culvert - 1 in 20
- Water shall not be released to the culvert until all installation is completed and loose material removed.

## 5 Consents Required

### 5.1 Proposed Water and Land Plan 2018

#### 5.1.1 Wetland Modification

The modification of wetland to enable installation of the proposed culvert is a non-complying activity under Rule 74 (c) of the proposed Southland Water and Land Plan 2018 (pSWLP). The use of land within a natural wetland that is not for one or more of the purposes listed in Rule 74(a) or 74(ab) and as such is a non-complying activity.

### 5.1.2 Diversion of Water pSWLP

There is no permitted activity rule under the pSWLP that allows the diversion of groundwater or surface water in a wetland. As there is no rule expressly allowing the diversion of water in the regional plan a resource consent is required under Section 14 (3) (a) of the RMA 1991 for the proposed diversion of groundwater and / or surface water. A discharge consent is therefore required for the diversion of water through the proposed third culvert to the downstream side of the Trail. Under Rule 4 of the proposed Southland Water and Land Plan 2018 (pSWLP) any activity that would otherwise contravene Section 14(3) of the RMA and is not classified by the pSWLP as any other class of activity listed in Section 87A of the RMA is a discretionary activity.

## 5.2 Operative Regional Water Plan 2010

Under Rule 20 (c) of the Southland Regional Water Plan 2010 (RWP) the diversion of water from any naturally occurring wetland is a discretionary activity.

## 5.3 Summary

Resource consent is required for diversion of water under both the operative and proposed regional water plans as a discretionary activity. Resource consent is required for wetland modification as a non-complying activity under the pSWLP.

# 6 Assessment of Environmental Effects

## 6.1 Hydrology

Mr Hamilton's review (Appendix 2) has considered hydrology effects associated with the 35m of Trail that the wetland modification application (APP-2019-1150) relates to and concludes as follows:

*"It is concluded that the construction of the trail between the northern and southern culverts has reduced the interflow from upstream to downstream of the trail through the higher ground between the two 800mm culverts. A small area adjacent to the water table that feeds to the southern culvert would also have been affected.*

*It is recommended that remediation be undertaken:*

- (a) *through filling in of the water table as previously proposed by Opus in letter 27 March 2019, and*
- (b) *placing a 300-400mm diameter culvert through the high ground approximately halfway between the two larger culverts. The actual location should be confirmed on site".*

This application seeks resource consent to undertake recommendation (b) and install a third culvert to enable the flow of water in the wetland either side of the Trail. In the context of the application site having been altered by the construction of 35 metres of Trail the proposed activity will mitigate adverse effects associated with the construction of the trail on the hydrology of the wetland.

## 6.2 Ecology

An Ecological Assessment of the effects of construction of the Trail on wetland ecology was undertaken by Simon Beale of Beale Consultants Ltd and was supplied as part of application APP-2019-1150. The Assessment is included in this application as Appendix 3. The Assessment in relation to ecological effects stated: *"The effect of trail construction on the hydrological and ecological function of the wetland is assessed as less than minor"*.

The Ecological Assessment was then reviewed by Dr Kelvin Lloyd of Wildlands Consultants Ltd. Dr Lloyd provided three different assessments as detailed in Appendix 3. The Assessments reflect discussions that occurred between Mr Beale and Dr Lloyd, further information provided by FTT and amendments to the application promoted by FTT. Dr Lloyd in his third and final assessment of 11 April 2019 concludes that the ecological effects on the wetland should be no more than minor:

*"In our opinion, the residual adverse effects of wetland vegetation clearance caused by track construction can be addressed by the positive effects of weed control over the 2,000-metre squared area centred on the wetland and its riparian margins. Overall, the ecological effects on the wetland should be no more than minor if these actions, and the actions suggested earlier, are undertaken with sufficient care and diligence".*

As noted above this application seeks resource consent to install a third culvert to enable the flow of water in the wetland either side of the Trail. The proposed activity will ensure that the hydrological and ecological function of the wetland on the downstream side of the trail will be maintained. Positive ecological effects will arise as a result of pest plant control measures promoted by FTT as part of the associated wetland modification resource consent application and activity.

The installation of the culvert will require works within the wetland. No vegetation will need to be removed as part of the works. These works will be of a minor nature, will not give rise to adverse environmental effects that are more than minor and will have positive ecological effects.

### 6.3 Water Quality

There may be limited minor temporary release of sediment into groundwater and surface water when works are completed, and water is diverted through the new culvert. Any effects of water quality associated with this will be no more than minor and no on-going effects on water quality will arise from the proposed activity.

### 6.4 Infrastructure

The RMA definition of infrastructure includes 'structures for transport on land such as cycleways and walkways' and the Trail is consistent with this definition. The Trail is also consistent with the pSWLP definition of regionally significant infrastructure. The proposed activity is associated with regionally significant infrastructure, will enable legalisation of the 35m section of Trail that crosses the wetland and will have positive effects on infrastructure.

### 6.5 Public Access & Recreation

The 35m section of Trail that this application relates to is providing beneficial recreational opportunities and improved visitor experiences of the Te Anau – Manapouri area by improving public access into and through public land and conservation land. Locals are also regular users of the Trail and enjoy the recreational opportunities it provides. The Trail is available for use by both cyclists and pedestrians including residents and visitors and is having positive effects in relation to public access. The proposed activity will support and enable use of part of the Trail and will have positive public access and associated recreation effects.

### 6.6 Transportation Effects

The Trail provides an important cycleway and walkway connection between Te Anau and Manapouri. The Trail provides an alternative transport route between the two townships to State highway 95 (SH95). There is no formed footpath or cycleway on SH95. The proposed activity is associated with regionally significant infrastructure, will enable use of the 35m section of Trail that crosses the wetland and will have positive transportation effects.

## 6.7 Social and Economic

The activity is having social and economic benefits. Provision of enhanced public access to public land and improved recreational opportunities are positive social effects. In terms of social benefits, economic benefits are arising from people visiting the area to ride or walk the Trail and related economic activity.

## 6.8 Summary of Effects

The adverse effects of the activity will be no more than minor and there are positive environmental, social and economic effects.

# 7 Statutory Considerations

## 7.1 Resource Management Act 1991

All resource consent applications must be considered against Part 2 of the Resource Management Act 1991 (RMA). Council must be satisfied that in granting a resource consent, Part 2 of the RMA will be achieved.

### Section 5

Section 5 sets out the purpose of the RMA to promote the sustainable management of natural and physical resources. Section 5 requires activities to be managed so to avoid, remedy or mitigate adverse effects on the environment. The proposed culvert and associated works is consistent with sustaining the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations (Section 5 (2) (a)), will give rise to no more than minor adverse effects on the environment (Section 5 (2) (b)), and will safeguard the life-supporting capacity of air, water, soil, and ecosystems (Section 5 (2) (c)). The activity is consistent with the sustainable management of natural and physical resources.

### Section 6

Section 6 of the RMA lists the matters of national importance which are to be recognised and provided for. The Section 6 matters of relevance to this application are: The preservation of the natural character of wetlands lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development (Section 6 (a)); The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna (Section 6 (c)); and The maintenance and enhancement of public access to and along lakes, and rivers (Section 6 (d)), and the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga (Section 6 (e)). The assessment of effects above discusses the effects of the activity in relation to these matters and concludes that they are no more than minor. The activity is consistent with the relevant Section 6 matters.

### Section 7

Section 7 lists other matters to regard in relation to managing the use, development, and protection of natural and physical resources. Of relevance to this application is the intrinsic values of ecosystems (s7(d)). Other relevant Section 7 matters include the efficient use and development of natural and physical resources (s7(b)), maintenance and enhancement of amenity values (s7(c)) and maintenance and enhancement of the quality of the environment (s7(f)).

The proposed activity is consistent with the efficient use and development of natural and physical resources, the maintenance and enhancement of amenity values and maintenance and enhancement of the quality of the environment. The proposed activity is enabling public access and recreational opportunities on public land. Construction of part of Leg 6 of the Trail across a

wetland is not giving rise to any significant effects on amenity values and is contributing to the quality of the environment. Regarding s7(d), as discussed above any adverse environmental effects will be no more than minor and there are several positive social, recreational and public access benefits associated with the Trail and the proposed culvert and associated works will have positive ecological effects.

### Section 8

The principles of the Treaty of Waitangi (Te Tiriti o Waitangi) must be accounted for in accordance with Section 8. The relevant issues and policies of Te Tangi a Tauira are assessed and discussed below. Consultation with TAMI has also been undertaken and their written approval obtained. There is nothing to indicate the application site is a culturally significant site. The activity is not inconsistent with the principles of the Treaty of Waitangi.

## 7.2 National Policy Statement for Freshwater Management (NPSFM) 2014

The NPSFM supports improved freshwater management in New Zealand. It does this by directing regional councils to establish objectives and set limits for fresh water in their regional plans. The proposed activity is not inconsistent with the relevant objectives and policies of the NPSFM.

## 7.3 Regional Policy Statement 2017

The Regional Policy Statement for the Southland Region (SRPS) provides an overview of the resource management issues of the region. It sets out how natural and physical resources are to be managed in an integrated way to promote sustainable management.

### *Objective INF.1 – Southland's infrastructure*

*Southland's regionally significant, nationally significant and critical infrastructure is secure, operates efficiently, and is appropriately integrated with land use activities and the environment.*

The Trail is consistent with the SRPS definition of regionally significant infrastructure. Objective INF.1 seeks to enable the efficient operation of Southland's regionally significant infrastructure. The proposed activity is consistent with efficient operation of the wider Trail.

### *Policy INF.1 - Regional, national and critical infrastructure*

*Recognise the benefits to be derived from, and make provision for, the development, maintenance, upgrade and ongoing operation of regionally significant, nationally significant and critical infrastructure and associated activities.*

This policy seeks to recognise the benefits to be derived from the development of infrastructure and provides for the development and ongoing operation of regionally significant infrastructure. It also seeks to provide for the development and ongoing operation of regionally significant infrastructure such as the Trail. The proposed activity is consistent with this policy.

### *Policy INF.2 – Infrastructure and the environment*

*Where practicable, avoid, remedy or mitigate the adverse effects of infrastructure on the environment. In determining the practicability of avoiding, remedying, or mitigating adverse effects on the environment, the following matters should be taken into account:*

- (a) any functional, operational or technical constraints that require the physical infrastructure of regional or national significance to be located or designed in the manner proposed;*
- (b) whether there are any reasonably practical alternative designs or locations;*

- (c) *whether good practice approaches in design and construction are being adopted;*
- (d) *where appropriate, and such measures are volunteered by a resource user, whether any significant residual adverse effects can be offset or compensated for; and*
- (e) *the need to give effect to the NPSET (2008) including that planning and development of the transmission system should seek to avoid adverse effects on outstanding natural landscapes, areas of high natural character and areas of high recreation value and amenity and existing sensitive activities.*

This policy requires Inclusion of objectives, policies and methods in regional plans that will enable the development, use, maintenance and upgrading of infrastructure, whilst ensuring the management of any associated adverse effects. The pSWLP does include provisions that do this, and these are discussed further below. There is a functional and operational need for the physical infrastructure of the Trail to cross the wetland in this area and the proposed activity is consistent with this policy.

#### *Objective TRAN.1 – Transport and land use*

*Development of transport infrastructure and land use take place in an integrated and planned manner which: (a) integrates transport planning with land use; (b) protects the function, safety, efficiency and effectiveness of the transport system; (c) minimises potential for reverse sensitivity issues to arise from changing land uses; (d) provides for positive social, recreational, cultural and economic outcomes; (e) minimises the potential for adverse public health and environmental effects; (f) enhances accessibility and connectivity, maximising transport choice for users of the transport system.*

The Trail is transport infrastructure and the proposed activity is consistent with protection of the function, safety, efficiency and effectiveness of the transport system (b). Provision of positive social, recreational and economic outcomes (d) and maximising of transport choice (f).

#### *Policy TW.3 Take iwi management plans into account.*

The iwi management plan for Southland - Te Tangi a Tauria is considered and discussed below.

#### *Objective WQUAL.1 Water quality in the region:*

- (a) *safeguards the life-supporting capacity of water and related ecosystems;*
- (b) *safeguards the health of people and communities;*
- (c) *is maintained, or improved in accordance with freshwater objectives formulated under the National Policy Statement for Freshwater Management 2014;*
- (d) *is managed to meet the reasonably foreseeable social, economic and cultural needs of future generations.*

#### *Policy WQUAL.1 Overall management of water quality*

- (a) *Identify values of surface water, groundwater, and water in coastal lakes, lagoons, tidal estuaries, salt marshes and coastal wetlands, and formulate freshwater objectives in accordance with the National Policy Statement for Freshwater Management 2014; and*

- (b) *Manage discharges and land use activities to maintain or improve water quality to ensure freshwater objectives in freshwater management units are met.*

*Policy WQUAL.3 Identify and protect the significant values of wetlands and outstanding freshwater bodies.*

*Policy WQUAL.7 Recognise the social, economic and cultural benefits that may be derived from the use, development or protection of water resources.*

Regarding Objective WQUAL.1, Policy WQUAL.1 and Policy WQUAL.3, as noted above the proposed activity is not likely to give rise to any significant adverse environmental effects in relation to water quality and is consistent with these provisions. In relation to Policy WQUAL.7 the Trail brings social and economic benefits to the Te Anau and Manapouri communities and is consistent with Policy WQUAL.7.

*Objective BIO.2*

*Maintain indigenous biodiversity in Southland and protect areas of significant indigenous vegetation and significant habitats of indigenous fauna for present and future generations.*

*Policy BIO.2*

*Areas of significant indigenous vegetation and significant habitats of indigenous fauna in the Southland region will be protected and, where appropriate, enhanced. In giving effect to this policy, particular regard will be had to the following potential adverse effects:*

- (i) fragmentation of, or reduction in the extent of, significant indigenous vegetation or significant habitats of indigenous fauna;*
- (ii) fragmentation or disruption of connections and linkages between significant ecosystems or significant habitats of indigenous fauna;*
- (iii) loss of, or damage to, buffering of significant ecosystems or significant habitats of indigenous fauna;*
- (iv) loss or reduction of rare or threatened indigenous species populations or habitats.*

*Policy BIO.4*

*Manage a full range of indigenous habitats and ecosystems to achieve a healthy functioning state, and to ensure viable and diverse populations of native species are maintained, while making appropriate provisions for lawful maintenance and operation of existing activities. In giving effect to this policy, regard will be had to the following potential adverse effects:*

- (i) fragmentation of, or reduction in the extent of, indigenous vegetation or habitats of indigenous fauna;*
- (ii) fragmentation or disruption of connections and linkages between ecosystems or habitats of indigenous fauna;*
- (iii) loss of, or damage to, buffering of ecosystems or habitats of indigenous fauna;*
- (iv) loss or reduction of rare or threatened indigenous species' populations or habitats.*

*The activity is not contrary to the relevant objectives and policies of the SRPS. The SRPS recognizes the importance of regionally significant infrastructure, seeks to enable its efficient operation and requires provision for its development and ongoing operation.*

Regarding Objective BIO.2 the proposed activity will ensure the protection of the wetland and will maintain indigenous biodiversity values. The proposed activity is a mitigation measure promoted by the applicant and will protect areas of significant indigenous vegetation and significant habitats of indigenous fauna for present and future generations. The activity is consistent with Objective 2. Regarding Policy BIO.2 and Policy BIO.4 the proposed activity is a mitigation measure promoted that will assist in terms of protecting an area of significant indigenous vegetation and significant habitats of indigenous fauna. The proposed activity will not result in fragmentation, reduction in the extent of, connections and linkages, loss of or damage to indigenous habitats and ecosystems and is not contrary to these policies.

The proposed activity is not contrary to the relevant objectives and policies of the SRPS. The SRPS recognizes the importance of regionally significant infrastructure, seeks to enable its efficient operation and requires provision for its development and ongoing operation.

#### 7.4 Operative Regional Water Plan 2010

The objectives and policies of the Regional Water Plan (RWP) that are relevant to this application are listed and discussed below.

##### *Objective 10 – Habitats and ecosystems*

*To maintain or enhance the diversity and integrity of aquatic and riverine habitats and ecosystems.*

Objective 10 requires habitats and ecosystems to be maintained, and where possible enhanced. The ecological effects have been discussed above, the activity will maintain wetland habitat integrity and ecosystem function and is consistent with this objective.

*Objective 12 To maintain and enhance public access to river beds (including beds of streams and modified watercourses) and lake beds except in circumstances where public health and safety are at risk.*

The proposed activity relates to a 35m section of the Lake 2 Lake Trail which provides a connection between the Waiau River and Lakes Te Anau and Manapouri. The proposal is consistent with the intent of the objective because it is part of a proposal that maintains and enhances public access to river and lake beds.

##### *Policy 1A Take into account Iwi Management Plans*

In relation to Policy 1A the relevant Iwi Management Plan has been taken into account and is discussed further below.

##### *Policy 3 – No reduction in water quality*

Policy 3 seeks no reduction in water quality and as identified above the effects of the proposed activity on water quality will be no more than minor.

*Policy 40 Encourage the maintenance and restoration of existing wetlands and the creation of new wetlands.*

The proposed activity is consistent with the maintenance of existing wetlands. The proposed culvert will maintain the hydrology and function of the wetland.

The proposed activity is not contrary to the relevant objectives and policies of the RWP.

## 7.5 Proposed Southland Water and Land Plan (pSWLP)

The objectives and policies of the pSWLP that are relevant to this application are listed and discussed below.

*Objective 1 - Land and water and associated ecosystems are sustainably managed as integrated natural resources, recognising the connectivity between surface water and groundwater, and between freshwater, land and the coast.*

Objective 1 is a broad high-level objective that sets the goal of sustainable management of land and water and associated ecosystems, the manner of management and the need to recognise the connectivity of water. As noted above the effects of the activity on the wetland are no more than minor. The proposed activity is not contrary to this objective. It recognises the connectivity between surface and ground water by providing for surface and sub-surface flows of water that would otherwise be impeded by the section of the Trail. In doing so it provides for the sustainable management of the wetland.

*Objective 2 - Water and land is recognised as an enabler of primary production and the economic, social and cultural wellbeing of the region.*

Objective 2 acknowledges water and land as an enabler for key RMA matters in the region. The activity is having positive social and economic effects and is contributing positively to the wellbeing of the Southland Region. The proposed activity is consistent with Objective 2.

*Objective 9A - Surface water is sustainably managed to support the reasonable needs of people and communities to provide for their social, economic and cultural wellbeing.*

The part of the Trail that this application relates to is supporting the local community in provision of social and economic wellbeing. The proposed activity is consistent with sustainable management of surface water to support the reasonable needs of people and communities to provide for their social and economic wellbeing. It will have no adverse effects on the sustainability of surface water and will have no adverse effects on any freshwater values.

*Objective 9B - The effective development, operation, maintenance and upgrading of Southland's regionally significant, nationally significant and critical infrastructure is enabled.*

Objective 9B seeks to enable the effective development of Southland's regionally significant infrastructure. The Trail is defined as regionally significant infrastructure. The proposed activity is consistent with enabling effective development of that regionally significant infrastructure.

*Objective 13 - Enable the use and development of land and soils to support the economic, social, and cultural wellbeing of the region.*

The proposed activity is consistent with enabling the use of land to support the economic and social wellbeing within the Southland Region.

*Objective 14 1 The range and diversity of indigenous ecosystem types and habitats within rivers, estuaries, wetlands and lakes, including their margins, and their life-supporting capacity are maintained or enhanced.*

Objective 14 seeks to maintain or enhance the range and diversity of indigenous ecosystem types and habitats within wetlands and their life-supporting capacity. The proposed activity will provide for the maintenance of the wetland ecosystem and its life supporting capacity by mitigating any effects of the Trail impeding or deflecting the flow of water downstream in the wetland. The diversion itself will have no adverse effects. It is consistent with Objective 14.

*Objective 16 - Public access to, and along, river (excluding ephemeral rivers) and lake beds is maintained and enhanced, except in circumstances where public health and safety or significant indigenous biodiversity values are at risk.*

The proposed activity is associated with a Trail that is enabling public access to an along Lake Manapouri and Lake Te Anau, the Waiau River and is consistent with Objective 16.

*Objective 17 - The natural character values of wetlands, rivers and lakes and their margins, including channel and bed form, rapids, seasonably variable flows and natural habitats, are protected from inappropriate use and development.*

The proposed culvert is a mitigation measures promoted by the applicant that will mitigate the effects of trail construction, is not inappropriate development and is consistent with the intent of Objective 17.

*Objective 18 - All activities operate in accordance with "good management practice" or better to optimise efficient resource use, safeguard the life supporting capacity of the region's land and soils, and maintain or improve the quality and quantity of the region's water resources.*

The activity and in particular the mitigation promoted by the applicant is considered consistent with good management practice. It is a non-extractive use and will have no effects on water quality and will maintain the water table on the downstream side of the Trail. It will maintain water quality.

*Policy 13 (1) Recognise that the use and development of Southland's land and water resources, including for primary production, enables people and communities to provide for their social, economic and cultural wellbeing.*

The proposed activity is associated with the multi-use Trail which is having positive social and economic effects and is contributing positively to the wellbeing of the Southland Region. The proposed activity is consistent with Policy 13(1).

*Policy 26A - Recognise and provide for the effective development, operation, maintenance and upgrading of regionally significant, nationally significant and critical infrastructure in a way that avoids where practicable, or otherwise remedies or mitigates, adverse effects on the environment.*

This policy implements Objective 9B, discussed above. The effective development of this piece of regionally significant infrastructure needs to be recognised and provided for. The proposed activity will have no more than minor adverse environmental effects and will have positive effects.

*Policy 32 (3) Protect significant indigenous vegetation and significant habitats of indigenous fauna associated with natural wetlands, lakes and rivers and their margins.*

The proposed activity will protect significant indigenous vegetation and significant habitats of indigenous fauna associated within the wetland and is consistent with this policy by mitigating any adverse effects of the Trail.

*Policy 33 Prevent the reduction in area, function and quality of natural wetlands, including through drainage, discharges and vegetation removal.*

The proposed activity will maintain the function and quality of the wetland and will not directly result in loss of area of wetland. It is consistent with this policy.

The proposed activity is not contrary to the relevant objectives and policies of the pSWLP.

## 8 Te Tangi a Taurira

The proposed activity is generally consistent with the relevant policies of the iwi management plan 'Te Tangi'. The wetlands policy of Te Tangi 9.6.4 Wetlands (3.5.18) 1 states:

*Avoid the direct or indirect drainage or modification of any existing wetland area.*

The proposed activity is a mitigation measure that will address potential modification of the wetland hydrology due to trail construction and is considered consistent with this policy.

## 9 Consultation

FTT have consulted the Department of Conservation, Te Ao Marama Inc and Fish & Game Southland in relation to this application and sought the written approval of these agencies. The written approvals will be provided to SRC if or when obtained.

## 10 Section 104D

Wetland modification is a non-complying activity under Rule 74 of the pSWLP. When considering a non-complying activity, the Council may only, in accordance with section 104D, grant a resource consent for the activity if it is satisfied that the adverse effects of the activity are minor, or the application is for an activity that will not be contrary to the objectives and policies of the relevant plan or proposed plan. If the application passes one of either of the limbs of the "gateway" tests in section 104D, under section 104B the Council may grant or refuse consent and if it grants the application, may impose conditions under section 108 of the RMA. There is no primacy given to either of the two limbs, so if one limb can be passed then the 'test' is passed. As one of the limbs of the 'gateway test' has been passed, then the application is eligible for approval under s104.

As noted above the adverse environmental effects of the proposed activity will be no more than minor. The effects gateway test is therefore met.

The proposed activity has been assessed against the relevant objectives and policies above and the activity is not contrary to the relevant objectives and policies. The policy gateway test is therefore also met.

## 11 Conclusion

The adverse environmental effects of the proposed activity will be no more than minor, and the proposal will ensure wetland function is maintained and its biodiversity values protected. On balance the activity is consistent with relevant RMA plan and policy documents and the purpose of the Resource Management Act 1991, in that it will provide for the sustainable management of the natural and physical resources

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## Appendix A – Third Culvert Location and Details







**Figure 1: Drone image of section of trail showing proposed remediation work**

## Appendix B – Hydrology Review



Fiordland Trails Trust

Attention: David Boniface [dajeck@xtra.co.nz]

## Hydrology Review Fiordland Trails Trust Lake 2 Lake Leg 6

Resource Consent Application Reference: APP-20191150

Dear David,

In accordance with our Agreement dated 22 August 2019 we have undertaken a desktop review of existing information relating to the application for a retrospective consent for wetland modification on a section of Leg 6 of the Lake 2 Lake Trail near Manapouri. This report reviews the hydrological aspects of the trail and recommends remediation work.

### *Material Reviewed*

The Opus resource consent application and the Environmental Report by Beale Consultants November 2018 have been reviewed. The effects of the trail on the upper part of the wetland have been identified in Wildland Consultants report dated 26 February 2019 Effects Assessment that states:

- **The trail cuts across the flow of water in the upper part of the wetland, and diverts previously inflowing water into an adjacent stream. This is likely to cause local drying of the wetland adjacent to the water table, and reduce water flow to the larger downstream part of the wetland. These effects are likely to cause local changes in wetland vegetation over time, allowing facultative wetland species such as mānuka to increase in abundance at the expense of obligate wetland species such as purei.**

In addition the Environment Southland request for further information dated 7 March 2019 and the Opus reply dated 27 March 2019 has been reviewed.

### *Aerial Imagery and Photos*

The site has not been visited. Aerial photos with 0.75m and 0.4m definition for the area taken in 2008 and 2017 respectively have been used for site familiarisation. GoogleEarth images from 2007, 2013, 2014 and 2019 have also been viewed. Drone images supplied by David Boniface and ground photos from Simon Beale and David Boniface have been viewed.

### *Culvert installation*

Two 800mm diameter plastic pipe culverts have been installed and details of depth of invert provided (David Boniface L2L Trail Leg 6, Culvert Analysis, Supply Bay Road to Twidle Property, August 2018). The channels upstream and downstream of the culverts do not appear to have been altered so groundwater levels should be similar to before construction.

### *Track Construction and Watertable*

The track construction included stripping of vegetation and most topsoil. The placement of fill for the trail would have reduced natural flows at that level. Flows in the gravels underneath the stripped zone would still pass through the site.

Photos of the watertable that drains towards the southern culvert on the upstream side of the track indicate that this is up to 400mm deep, although generally more like 300mm. This watertable picks up a small channel that would have continued on to ground between the two culverts downstream of the track.

*Area potentially affected by reduced groundwater levels*

The areas potentially affected by the track construction on upstream and downstream sides of the track are shown on the attached Figure 1.

*Proposed Solution*

The proposed remediation by way of filling in the upstream watertable is supported as a part solution. A small diameter pipe, nominal size 300mm to 400mm diameter, to pass the higher elevation water between the 800mm culverts would return water to the area of higher ground below the track, and ensure this area does not dry out. This should be placed approximately halfway between the two larger culverts., with the actual location to be confirmed on site. It is considered that a culvert with the ability to pass 20 l/s should be sufficient. This could be provided by a 200mm diameter culvert. Smaller culverts can have a tendency to get root bound and cleaning out is easier with a culvert in the 300 to 400mm diameter size and should be used. See Figure 1 attached for details.

*Discussion and Conclusion*

It is concluded that the construction of the trail between the northern and southern culverts has reduced the interflow from upstream to downstream of the trail through the higher ground between the two 800mm culverts. A small area adjacent to the watertable that feeds to the southern culvert would also have been affected.

It is recommended that remediation be undertaken:

- (a) through filling in of the watertable as previously proposed by Opus in letter 27 March 2019, and
- (b) placing a 300-400mm diameter culvert through the high ground approximately halfway between the two larger culverts. The actual location should be confirmed on site.

Yours faithfully,



David Hamilton  
Senior Water Resources Engineer



Fiordland Trails Trust Leg 6 Lake 2 Lake Section  
 Proposed Mitigation/ Remediation Works  
 Base image is drone image supplied by David Boniface  
 David Hamilton, Geosolve Ltd 2 September 2019

**Figure 1: Drone image of section of trail showing proposed remediation work**

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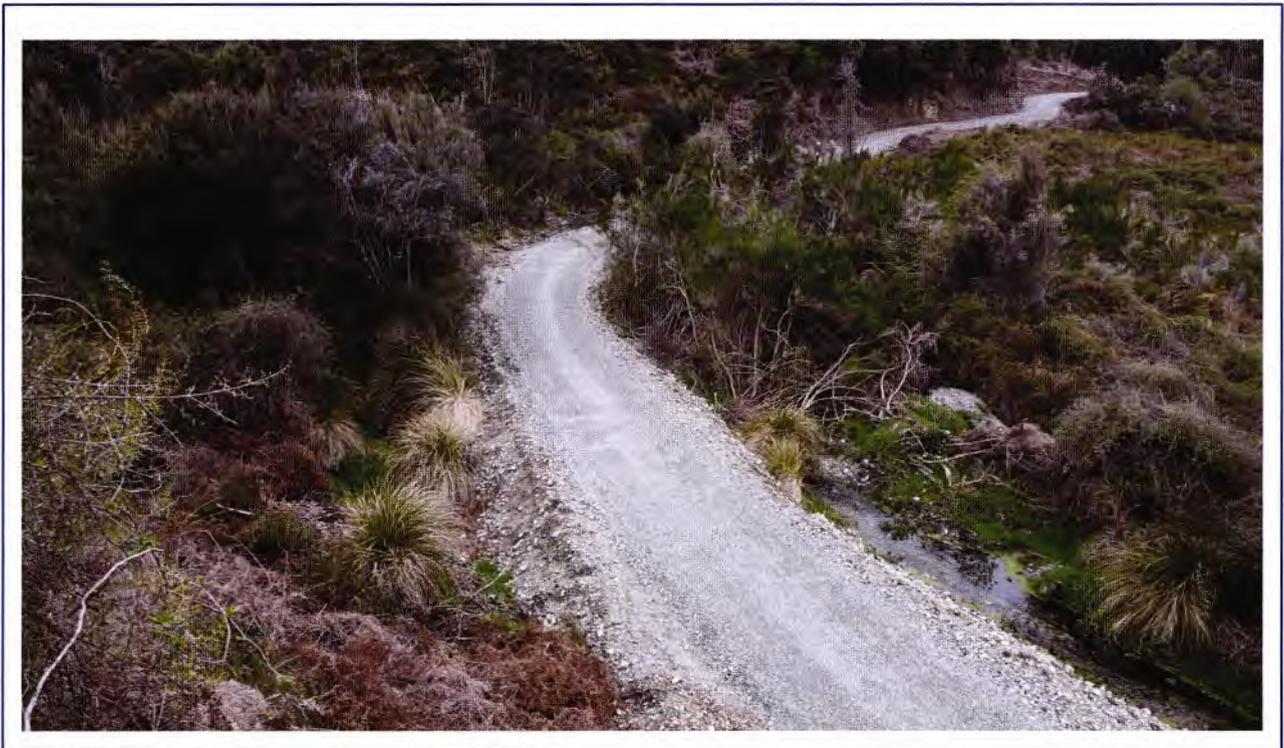
## Appendix C – Ecological Assessments



**BEALE  
CONSULTANTS**

# **Te Anau – Manapouri Multi- Purpose Trail Ecological Assessment of Leg 6 Wetland Crossing**

Prepared for Fiordland Trails Trust  
November 2018



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Document Details:

Date: November 2018  
Reference: FTT  
Report No: 2  
Status: Final

Prepared by:



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Simon Beale | Senior Ecologist

Reviewed by:



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Glenn Davis | Senior Ecologist

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## Appendices

### Appendix 1: Herpetofauna Database Search Results

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## 1. Introduction

Fiordland Trails Trust (FTT) has commissioned Beale Consultants Limited to undertake an ecological assessment of a wetland that has been affected by the construction of Leg 6 section of the Te Anau – Manapouri multi-purpose trail.

The construction of the trail has resulted in encroachment on a small wetland associated with the spring fed stream that drains into Lake Manapouri. The wetland occupies a broad gully of a shallow gradient at this location.

The purpose of the ecological assessment is to assess the ecological significance of the affected wetland and effects of trail construction on wetland function.

The location of the wetland is indicated on Figure 1-1.



Figure 1-1: Location Plan

## 2. Description of Trail

The trail crosses the wetland over a distance of approximately 35 metres. The trail crosses two streams that are spanned with 800 mm diameter circular polyethylene culverts (hereinafter referred to as the northern and southern culverts). The streams define the wetland extent.

The trail has been formed to a width of 3.0 metres incorporating a 2.2 metre wide graveled surface and steep graveled shoulders.

A water table has been formed on part of the upstream side of the trail to direct sub-surface flows from the wetland to the southern culvert.

The trail climbs steadily across the face of terrace risers beyond the culverts.

### 3. Survey Methodology

Inspections of the wetland was conducted on 11 October 2018. During the inspection the composition, structure and condition of the affected wetland plant communities, and the occurrence of any species with a threat classification was recorded.

### 4. Ecological Context

This part of the Leg 6 section of the trail is located at approximately 190 metres above sea level within the Upukeora Ecological District.

The Land Environments of New Zealand (LENZ) Level IV<sup>1</sup> classification indicates that the affected wetland is located in Environment Q4.1d. Environment Q4.1d is described as easy rolling hills with a cool climate and low annual water deficits with soils that are well drained and of moderate natural fertility (Leathwick et al, 2002). The indigenous vegetation cover including wetland vegetation remaining in Environment Q4.1d at a national scale is approximately 15.5% of its former extent.

The trail on either side of the wetland passes through regenerating or secondary (seral) indigenous vegetation dominated by manuka scrub and shrubland, exotic broom scrub and in places patches of low broadleaved forest/shrubland and fernland dominated by bracken.

### 5. Description of Wetland

Site observations and reference to the semi-hierarchical wetland classification system of Johnson and Gerbeaux 2004 confirm that the wetland is influenced by a riverine hydrosystem and is classified as a marsh. The classification system describes a marsh as being subject to moderate to high water fluctuations and may occur along the margins of river or stream. Evidence of a high degree of fluctuation and wetness is evident between the streams on the upstream side of the track where areas of mud and fine silts prevail.

The general growth form or structure of the wetland vegetation is sedgeland which the Johnson and Gerbeaux classification defines as comprising a cover of sedges that exceeds any other growth form. The sedgeland in the vicinity of the track consists almost exclusively of purei (*Carex secta*) which colonises the riparian margins of the two streams along with the occasional shrub of mingimingi (*Coprosma propinqua*) and weeping mapou (*Myrsine divaricata*) as shown on Figure 5-1.

An extensive area of sedgeland dominated by purei exists downstream of the culvert as shown in Figure 5-2.

Areas of wet ground with muddy-silty substrates lie between the streams and are predominately colonised by stands of manuka (*Leptospermum scoparium*), shrubs of mingimingi (*Coprosma propinqua*), the sedge rautahi (*Carex coriacea*) and swamp kiokio (*Parablechnum minus*) as shown on Figure 5-3.

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<sup>1</sup> The national landscape classification of land environments (LENZ, Leathwick et al. 2002) groups together land environments with similar environmental characteristics such as climate, landform, geology and soil variables which influence the distribution of indigenous vegetation. LENZ has four different scales of classification, from Level I (20 Groups) to Level IV (500 Groups).



Figure 5-1: Purei bordering the inlet to the northern culvert.



Figure 5-2: Extensive sedgeland of purei downstream of the southern culvert.



Figure 5-3: Rautahi and manuka cover on damp ground bordering water table near the southern culvert.

Intervening areas of dry ground also occur between the streams where broom scrub and thickets of bracken prevail as shown on Figure 5-4.

During the site inspection no flora with a threat classification were observed in the wetland in the vicinity of the track.



Figure 5-4. Elevated view of northern culvert crossing looking in a southward direction showing broad vegetation patterns within the wetland.

## 6. Fauna

A review of field survey records contained in the Atlas of Bird Distribution in New Zealand 1999-2004 and habitat information provided on New Zealand Birds Online<sup>2</sup> suggests that the wetland vegetation including sedgeland and shrubland is likely to be inhabited by Australasian harrier, pukeko, tui, bellbird, grey warbler, brown creeper, fantail, silvereye and NZ tomtit owing to the existence of suitable nesting and feeding habitat.

A search of the herpetofauna database and a supporting narrative provided by Wildlands Consultants for the Leg 6 trail project indicates a high likelihood of occurrence of the Southern grass skink (*Oligosoma polychroma*) along the trail. The preferred habitat for this skink is damp habitat such as rank grass associated with areas of grassland, shrubland and near forest edges. Small areas of exotic grassland occur within the wetland. The database search indicates a low likelihood of occurrence of Korero gecko (*Woodworthia* sp. "Otago-large") and green skink (*Oligosoma chloronoton*) with the former likely to occupy mature beech trees and under driftwood near the lake and the latter occupying dense ground level vegetation. All three species have a conservation status of At Risk-Declining. A table summarising the search results provided by Wildlands is provided in Appendix 1.

The wetland vegetation provides a range of habitat for invertebrates. These include arboreal and ground dwelling invertebrates such as weta (*Orthoptera*), ants (*Formicidae*), spiders (*Araneae*), millipedes (*Diplopoda*), litter hoppers (*Amphipoda*) and slaters (*Porcellionidae*) many inhabiting leaf litter and decaying logs. These in turn provide food sources for insectivorous birds such as grey warbler, brown creeper, fantail and NZ tomtit.

## 7. Ecological Significance

### 7.1. Introduction

Determination of whether the wetland is significant in terms of Section 6(c) of the Resource Management Act 1991 is based on the assessment criteria listed in Appendix 3 of the Southland Regional Policy Statement 2017 (RPS). Part of the explanation to the appendix states that an area is significant if it meets one or more of the assessment criteria.

This section evaluates the affected indigenous wetland vegetation and habitats of indigenous fauna against each of the RPS assessment criteria listed below.

### 7.2. Representativeness

#### Description

- i. *Indigenous vegetation or habitat of indigenous fauna that is representative, typical or characteristic of the natural diversity of the relevant ecological district or coastal biogeographic region. This can include degraded examples where they are some of the best remaining examples of their type, or represent all that remains of indigenous biodiversity in some areas.*
- ii. *Indigenous vegetation or habitat of indigenous fauna that is a relatively large example of its type within the relevant ecological district or coastal biogeographic region.*

#### Evaluation

The indigenous wetland vegetation bordering the track exhibits natural diversity characteristic of wetlands in the Te Anau Ecological District. The wetland is a small sized example of sedgeland dominant marsh in the district.

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<sup>2</sup> [nzbirdsonline.org.nz/](http://nzbirdsonline.org.nz/)

### 7.3. Rarity/Distinctiveness

#### Description

- i. Indigenous vegetation or habitat of indigenous fauna that has been reduced to less than 20% of its former extent in the Region, or relevant land environment, ecological district, freshwater environment, or coastal biogeographic region.*
- ii. Indigenous vegetation or habitat of indigenous fauna that supports an indigenous species that is threatened, at risk, or uncommon, nationally or within the relevant ecological district or coastal biogeographic region.*
- iii. The site contains indigenous vegetation or an indigenous species at its distribution limit within Southland Region or nationally.*
- iv. Indigenous vegetation or an association of indigenous species that is distinctive, of restricted occurrence, occurs within an originally rare ecosystem, or has developed as a result of an unusual environmental factor or combinations of factors.*

#### Evaluation

The indigenous sedgeland and shrub vegetation in the wetland is located within a land environment where this vegetation has been reduced to less than 20% of its former extent nationally and possibly regionally. No threatened, at risk or uncommon plant species or fauna were observed in the vicinity of the track and additionally no species at their distribution limits were observed. The flora of the wetland is not of a restricted occurrence. The wetland is not located within an originally rare ecosystem.

### 7.4. Diversity and Pattern

#### Description

- i. Indigenous vegetation or habitat of indigenous fauna that contains a high diversity of indigenous ecosystem or habitat types, indigenous taxa, or has changes in species composition reflecting the existence of diverse natural features or ecological gradients.*

#### Evaluation

The indigenous wetland is not of a high diversity at an ecosystem or taxa level. An ecological gradient based on degree of wetness within the wetland is evident in the vegetation patterns encountered.

### 7.5. Ecological Context

#### Description

- i. Vegetation or habitat of indigenous fauna that provides or contributes to: an ecological linkage, ecological corridor or network; buffering function; or ecosystem service.*
- ii. A wetland which plays an important hydrological, biological or ecological role in the natural functioning of a water body, including a river or coastal system, or springs, lakes and streams.*
- iii. Indigenous vegetation or habitat of indigenous fauna that provides important habitat (including, but not limited to, refuges from predation, or key habitat for feeding, breeding, or resting) for indigenous species, either seasonally or permanently.*

#### Evaluation

The wetland vegetation and habitats in the vicinity of the track forms part of the ecological corridor linking areas of wetland upstream and downstream of the track. The sedgeland plays an important biological role in maintaining the stability of the riparian margins and water quality in the stream especially during high flows.

### 7.6. Summary

In summary, the wetland vegetation and habitats for indigenous fauna has been assessed to be of ecological significance in terms of Section 6(c) of the Resource Management Act 1991. The significance assessment reflects the representativeness of the wetland vegetation within the Upukerora Ecological District, the pattern of the vegetation types associated with the wetland and its ecological context.

### 8. Ecological Effects

The area of wetland impacted upon during trail construction has been estimated to be in the order of 120 m<sup>2</sup>. This figure is based on a cumulative 25 metres of trail spanning the wetland at the northern and southern streams along with a short section adjacent to a water table. The balance of the trail between the two stream extends across dry land where broom scrub occurs.

The loss of the wetland arising from trail construction represents a very small proportion of the overall area of wetland occurring upstream and downstream of the trail as shown on Figure 8-1. This is estimated to be in the order of 0.3% of the wetland area.

The effect of trail construction on the hydrological and ecological function of the wetland is assessed as less than minor.

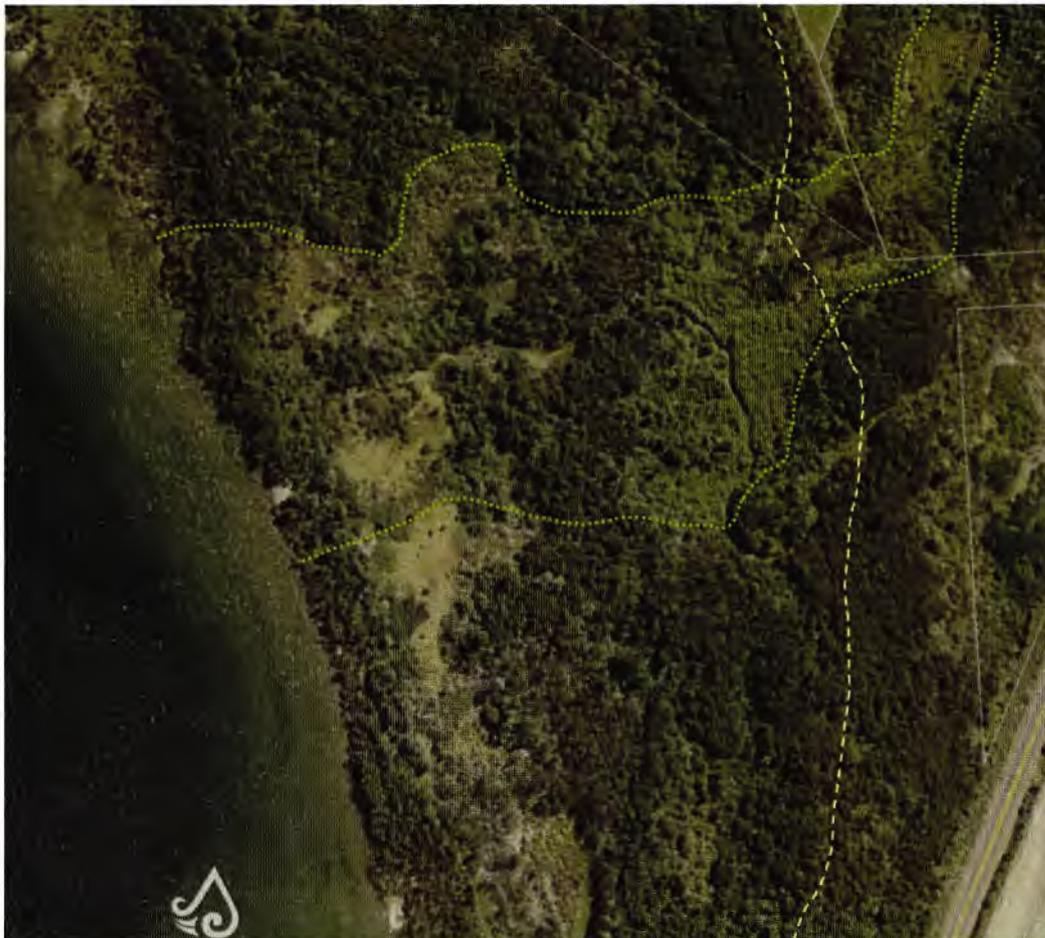


Figure 8-1: Aerial extracted from Southland District maps depicting trail alignment in context to the wetland.

## 9. Conclusions

The affected wetland vegetation is ecologically significant.

The magnitude of the effect of construction of the trail on the wetland is very low owing to the small area of wetland affected.

No indigenous flora with a threat classification was observed in the wetland plant communities adjacent to the trail.

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# **Appendix 1: Herpetofauna Database Search Results**

8 November 2017

Opus International Consultants Limited, c/- Beale Consultants, PO Box 113, Queenstown 9348.

To whom it may concern,

Please find below an assessment of lizard species (or potential lizard species) present along the Manapouri cycleway. This assessment revealed the likely presence of one lizard species (southern grass skink), and possible presence of two others at the site. At Manapouri, southern grass skinks are most likely to occur in rank grassland, shrubland, lake edges, or on / near the forest edge where they have easy access to sunlight.

Common name	Scientific name	Threat status	Likelihood of occurrence	Notes	Nearest known localities
Southern grass skink	<i>Oligosoma polychroma</i> ; Clade 5	At Risk-Declining	High	Prefers damp habitats with ground cover, including rank grass.	Found at both Lake Manapouri (incl. Frasers Beach) and Lake Te Anau. Widespread in the area, but not abundant.
Korero gecko	<i>Woodworthia</i> sp. "Otago-large"	At Risk-Declining	Low	Likely to occur in rocky areas, or in big mature beech trees. May occur under driftwood / logs near either lake.	Lake Te Anau near the start of the Kepler Track. Under driftwood / logs near Lake edge.
Green skink	<i>Oligosoma chloronoton</i>	At Risk-Declining	Low	Occupies damp areas with dense ground level vegetation.	Multiple reports around Lake Te Anau. Not recorded at Manapouri.

Yours sincerely,

Carey Knox  
Ecologist / Herpetologist



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Our Ref: R4957

26 February 2019

Lacey Bragg  
Environment Southland  
Private Bag 90116  
INVERCARGILL 9840

Dear Lacey

## REVIEW OF EFFECTS OF FIORDLAND TRAIL ON WETLAND VALUES

Environment Southland have received a retrospective resource consent application (APP-20191150 W4931) from the Fiordland Trails Trust to modify a wetland due to construction of a multi-use trail on the eastern margin of Lake Manapouri. The trail crosses the wetland approximately two kilometres northeast of Manapouri township. A report accompanying the application determines that the wetland is significant in terms of Section 6(c) of the RMA. The report then goes on to say that the effects of construction of the trail on the wetland will be very low owing to the small area of wetland affected. Environment Southland requires an independent assessment of the likely effects of trail construction on the wetland.

The remainder of this letter comprises technical comments on the likely effects.

### Wetland Location and Context

The wetland occurs at the base of small scarp on the eastern shore of Lake Manapouri. It is likely to be a spring-fed wetland as there is no obvious stream channel upstream of the wetland. The wetland occurs in mosaic of fernland, mānuka (*Leptospermum scoparium*) scrub, and Scotch broom (*Cytisus scoparius*). An informal walking track zigzags from the nearby Manapouri - Te Anau Highway to the lakeshore, just south of the wetland.

The application states that the trail crosses approximately 35 metres of the wetland and is formed to a width of three metres. Two streams on each side of the wetland define it and are associated with culverts placed under the trail. A water table has been formed on the upstream side of the trail to direct sub-surface flows from the wetland into the southern culvert.

### Ecological Assessment

The ecological assessment (Beale Consultants 2018) accompanying the application classifies the wetland as a marsh wetland, with the dominant wetland plant being purei (*Carex secta*), with

shrubs of mingimingi (*Coprosma propinqua*) and weeping mapou (*Myrsine divaricata*) on its margins. Wet ground between the two streams is occupied by stands of mānuka, shrubs of mingimingi, and the sedge rautahi (*Carex coriacea*) and swamp kiokio (*Parablechnum minus*), and this vegetation also comprises wetland vegetation. The report states that no plant species with a threat classification were observed in the wetland in the vicinity of the track. The report also indicates that one or more lizard species with a threat classification of At Risk-Declining may be present.

We note that one plant species found at the site, mānuka, has a current threat classification of At Risk-Declining, on the basis of the potential threat posed by myrtle rust (*Austropuccinia psidii*). Little weight has been attached to this due to the abundance of mānuka in Southland Region, because myrtle rust has not yet been detected in the lower South Island, and because mānuka is not a species that is commonly infected by myrtle rust in the North Island and northern South Island.

#### Effects Assessment - Beale Consultants

Beale Consultants (2018) assesses the effects of trail construction on the hydrological and ecological function of the wetland as being less than minor, due to the 120 m<sup>2</sup> loss of wetland habitat being a small proportion of the total wetland area.

#### Effects Assessment - Wildland Consultants

In my opinion, adverse effects on the wetland may be more than minor for the following reasons:

- The wetland has been classified as a marsh wetland, a wetland class that has been significantly cleared and modified in most parts of New Zealand.
- Clearance of indigenous wetland vegetation, while representing a relatively small wetland area, increases the cumulative loss of wetland extent, and the effects of this have not been avoided, remedied, or mitigated.
- The trail cuts across the flow of water in the upper part of the wetland, and diverts previously inflowing water into an adjacent stream. This is likely to cause local drying of the wetland adjacent to the water table, and reduce water flow to the larger downstream part of the wetland. These effects are likely to cause local changes in wetland vegetation over time, allowing facultative wetland species such as mānuka to increase in abundance at the expense of obligate wetland species such as purei.
- It is not clear if indigenous fish would use the small streams on each side of the wetland, but if so, the culverts installed could potentially provide barriers to fish passage.

#### Conclusion

The Beale Consultants (2018) report considers the effects on the wetland to be less than minor, but assesses only the area cleared in coming to this conclusion.

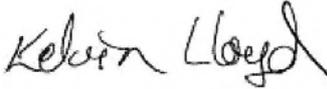
In my opinion the effects of constructing the trail across the wetland are likely to have been more than minor, due to hydrological effects which are likely to change the composition of the remaining wetland vegetation over time. Remediation, mitigation, or compensation actions could potentially address these adverse effects.

Please don't hesitate to contact me if you require further input or discussion.

REFERENCE

Beale Consultants 2018: Te Anau – Manapouri multi-purpose trail. Ecological assessment of Leg 6 wetland crossing. Prepared for the Fiordland Trails Trust.

Yours sincerely

A handwritten signature in black ink that reads "Kelvin Lloyd". The signature is written in a cursive style with a large, prominent 'K' and 'L'.

Kelvin Lloyd  
Principal Ecologist



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Our Ref: 4957b

8 April 2019

Sonja Nicol  
Environment Southland  
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Dear Sonja

### REVIEW OF EFFECTS OF THE FIORDLAND TRAIL ON WETLAND VALUES

Environment Southland have received a retrospective resource consent application (APP-20191150 W4931) from the Fiordland Trails Trust to modify a wetland due to construction of a multi-use trail on the eastern margin of Lake Manapouri. The trail crosses the wetland approximately two kilometres northeast of Manapouri township. A report accompanying the application states that the wetland is significant in terms of Section 6(c) of the RMA. The report then goes on to say that the effects of construction of the trail on the wetland are very low owing to the small area of wetland affected. Environment Southland required an independent assessment of the likely effects of trail construction on the wetland, which was provided on 26 February 2019 (Wildland Consultants 2019).

Following this, it was suggested (K. Lloyd, email to Environment Southland, 12 March 2019) that potential fish passage through culverts installed under the trail should be reassessed, a ditch excavated on one side of the formed trail should be filled in, monitoring of the infilled area should be undertaken to check for settling of the substrate (with re-filling if required), and monitoring of subsequent colonisation by rautahi (*Carex coriacea*) should be undertaken. The applicant has agreed to undertake these works and monitoring, and provided photographic evidence that showed fish passage should not be restricted through the culverts. If the infilling work is carried out successfully, this should remedy the adverse hydrological effects on the wetland to the point that they are less than minor.

The residual adverse effects relate to the direct loss of wetland vegetation caused by trail construction.

#### **EXTENT OF WETLAND LOSS**

Beale Consultants (2018) assessed the effects of trail construction on the hydrological and ecological function of the wetland as being less than minor, due to the 120 m<sup>2</sup> loss of wetland habitat being a small proportion (0.3%) of the total wetland area. However, the wetland extent indicated by Beale Consultants (2018) includes non-wetland habitat near the lake, and it is not clear

what area of wetland extent was used to calculate this percentage. Assessment of satellite imagery indicates, however, that the wetland may occupy only approximately 0.75 hectares, and thus the extent of clearance would be 1.6% of the wetland extent.

### **WETLAND SIGNIFICANCE**

The wetland was assessed as being significant by Beale Consultants (2018) in terms of the Representativeness, Rarity, and Ecological Context criteria in the Southland Regional Policy Statement:

- (a) *Representativeness*
  - (i) *Indigenous vegetation or habitat of indigenous fauna that is representative, typical or characteristic of the natural diversity of the relevant ecological district or coastal biogeographic region. This can include degraded examples where they are some of the best remaining examples of their type, or represent all that remains of indigenous biodiversity in some areas.*
- (b) *Rarity/Distinctiveness*
  - (i) *Indigenous vegetation or habitat of indigenous fauna that has been reduced to less than 20% of its former extent in the Region, or relevant land environment, ecological district, freshwater environment, or coastal biogeographic region.*
- (d) *Ecological Context*
  - (i) *Vegetation or habitat of indigenous fauna that provides or contributes to: an ecological linkage, ecological corridor or network; buffering function; or ecosystem service.*
  - (ii) *A wetland which plays an important hydrological, biological or ecological role in the natural functioning of a water body, including a river or coastal system, or springs, lakes and streams.*

The assessments against the Representativeness and Rarity criteria are appropriate, but the importance of this wetland in terms of the ecological context criteria is less certain.

### **PLANNING CONTEXT**

The retrospective consent sought has the status of a non-complying activity. As such, there is a relatively high test under Section 104D of the RMA. Before a consent authority can consider to grant or refuse a consent for a non-complying activity, it must be satisfied that either the effects of the activity are no more than minor, or the activities are not contrary to the policies and objectives of the relevant planning documents.

Relevant policies from the proposed Southland Water and Land Plan include:

- Objective 1 *Land and water and associated ecosystems are sustainably managed as integrated natural resources, recognising the connectivity between surface water and groundwater, and between freshwater, land and the coast.*
- Objective 14 *The range and diversity of indigenous ecosystem types and habitats within rivers, estuaries, wetlands and lakes, including their margins, and their life-supporting capacity are maintained or enhanced.*
- Objective 16 *Public access to, and along, river (excluding ephemeral rivers) and lake beds is maintained and enhanced, except in circumstances where public health and safety or significant indigenous biodiversity values are at risk.*

Objective 17 *The natural character values of wetlands, rivers and lakes and their margins, including channel and bed form, rapids, seasonably variable flows and natural habitats, are protected from inappropriate use and development.*

Objective 18 *All activities operate in accordance with "good management practice" or better to optimise efficient resource use safeguard the life supporting capacity of the region's land and soils and maintain or improve the quality and quantity of the region's water resources.*

**Policy 32 - Protect significant indigenous vegetation and habitat (pSWLP)**

*Protect significant indigenous vegetation and significant habitats of indigenous fauna associated with natural wetlands, lakes and rivers and their margins.*

**Policy 33 - Adverse effects on natural wetlands**

*Prevent the reduction in area, function and quality of natural wetlands, including through drainage, discharges and vegetation removal.*

**Policy 34 - Restoration of existing wetlands, the creation of wetlands and riparian planting**

*Recognise the importance of wetlands and indigenous biodiversity, particularly their potential to improve water quality, offset peak river flows and assist with flood control, through encouraging:*

1. *the maintenance and restoration of existing natural wetlands and the creation of new wetlands; and*
2. *the establishment of wetland areas and associated indigenous riparian plantings, including on farm, in subdivisions, on industrial sites and for community sewerage schemes.*

**CONSISTENCY WITH PLAN OBJECTIVES AND POLICY**

Construction of the trail through the wetland would appear to be at least partly contrary to Objective 14 and Objective 17, and contrary to Policy 32 and Policy 33.

**ARE THE EFFECTS LESS THAN MINOR?**

Residual adverse effects on the wetland are more than minor, for the following reasons. Various matters need to be considered to determine the scale of residual effects:

- The wetland has been classified as a representative marsh wetland, a wetland class that has is one of the most reduced classes of wetland in most parts of New Zealand.
- The wetland is located within a land environment that retains less than 20% of its original indigenous cover nationally.
- Recent research in Southland has shown that the rate of wetland loss has not slowed, with 10.5% of Southland's remaining wetlands (excluding those in Fiordland on Rakiura) being cleared between 1990 and 2012 (Robertson *et al.*, in press).
- Clearance of indigenous wetland vegetation, while representing a relatively small wetland area, increases the cumulative loss of wetland extent, and the effects of this have not been avoided, remedied, or mitigated.

Overall, even though the extent of wetland loss is relatively small, the residual adverse effects are more than minor, for the reasons set out above.

**OPTIONS TO FURTHER REDUCE THE RESIDUAL ADVERSE EFFECTS**

A grove of deciduous trees which are almost certainly willows (*Salix* spp.) occur approximately 100 metres upstream of the affected wetland. These are most likely to be crack willow (*Salix fragilis*) but could potentially be grey willow (*Salix cineria*). In either case, they are significant weeds of wetland ecosystems, and are likely spread further downstream, and into the affected

wetland over time. Willow invasion could potentially displace indigenous wetland vegetation and alter the hydrology of the wetland.

Eradication of these willow trees would therefore represent a very positive effect that may reduce the residual adverse effects on the wetland to less than minor. Willows can be drilled and poisoned *in situ*. Willow control sites should be monitored for regrowth and regeneration, with additional control undertaken if required.

Scotch broom (*Cytisus scoparius*) occurs in patches on the wetland margin, and while not likely to have adverse effects on the wetland, are very likely to be having adverse effects on the natural character of the wetland. Control of this Scotch broom could therefore mitigate adverse effects on natural character. Follow-up control would also be needed. Encouraging regeneration of mānuka on wetland margins, or planting it, would help to reduce future invasion of Scotch broom.

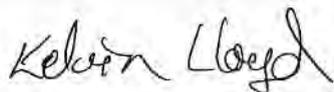
### **CONCLUSION**

Remediation of the adverse hydrological effects on the wetland is likely to reduce those effects to a less than minor level. Residual effects of wetland vegetation loss caused by track construction could be addressed by eradication of willow trees. Effects on natural character of the wetland could be mitigated by control of Scotch broom and increasing indigenous plant dominance on the wetland margins.

It should be noted that these conclusions are made without the benefit of having visited the site.

Please don't hesitate to contact me if you require further input or discussion.

Yours sincerely



Kelvin Lloyd  
Principal Ecologist

### **REFERENCES**

Beale Consultants 2018: Te Anau - Manapouri multi-purpose trail. Ecological assessment of Leg 6 wetland crossing. Prepared for the Fiordland Trails Trust.

Robertson H.A., Ausseil A-G., Rance B., Betts H., and Pomeroy E. In press. Loss of wetlands since 1990 in Southland, New Zealand. *New Zealand Journal of Ecology* 43: in press.

Wildland Consultants 2019: Review of effects of Fiordland Trail on wetland values. *Wildland Consultants Ltd Contract Report No. 4957*. Prepared for Environment Southland.



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Wildland Consultants Ltd

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PO Box 7137, Te Ngae  
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Ph: +64 7 343 9017  
ecology@wildlands.co.nz  
www.wildlands.co.nz

Our Ref: 4957c

11 April 2019

Sonja Nicol  
Environment Southland  
Private Bag 90116  
INVERCARGILL 9840

Dear Sonja

## REVIEW OF EFFECTS OF THE FIORDLAND TRAIL ON WETLAND VALUES

Environment Southland have received a retrospective resource consent application (APP-20191150 W4931) from the Fiordland Trails Trust to modify a wetland due to construction of a multi-use trail on the eastern margin of Lake Manapouri. The trail crosses the wetland approximately two kilometres northeast of Manapouri township. A report accompanying the application states that the wetland is significant in terms of Section 6(c) of the RMA. The report then goes on to say that the effects of construction of the trail on the wetland are very low owing to the small area of wetland affected. Environment Southland required an independent assessment of the likely effects of trail construction on the wetland, which was provided on 26 February 2019 (Wildland Consultants 2019a).

Following this, it was suggested (K. Lloyd, email to Environment Southland, 13 March 2019) that potential fish passage through culverts installed under the trail should be reassessed, a ditch excavated on one side of the formed trail should be filled in, monitoring of the infilled area should be undertaken to check for settling of the substrate (with re-filling if required), and monitoring of subsequent colonisation by rautahi (*Carex coriacea*) should be undertaken. The applicant has agreed to undertake these works and monitoring, and provided photographic evidence that showed fish passage should not be restricted through the culverts. If the infilling work is carried out successfully, this should remedy the adverse hydrological effects on the wetland to the point that they are less than minor.

The residual adverse effects related to the direct loss of wetland vegetation caused by trail construction, and control of willows (*Salix* spp.) upstream of the wetland, and of Scotch broom (*Cytisus scoparius*) adjacent to the trail through the wetland, were suggested as options to mitigate these residual adverse effects (Wildland Consultants 2019b). The Fiordland Trails Trust noted that the willow trees were on private land, creating difficulty for enforcement in consent conditions, and proposed that instead, the Trust would undertake further pest plant management within the wetland as an alternative option to enhance the wetland.

### **PROPOSED WEED CONTROL**

The Trust proposes to control noxious weed species including gorse (*Ulex europaeus*), Scotch broom, and Darwin's barberry (*Berberis darwinii*) in an approximate 2,000 metre squared area centred on the trail where it crosses the wetland, in order to improve indigenous plant dominance within the wetland and adjacent areas. The Trust would also discuss removal of the upstream willow trees with the landholder.

### **EVALUATION**

The proposed weed control would comprise a positive effect on the indigenous wetland vegetation and vegetation on wetland margins. This positive effect should be sufficient to address the residual adverse effects on the wetland. Performance standards, such as post-operational inspection and reporting, should be considered, to ensure the weed control is effective and that it is not adversely affecting indigenous vegetation.

Ongoing discussion by the Trust with the upstream landholder is supported; if this also enabled the upstream willow trees to be controlled, that would be very positive.

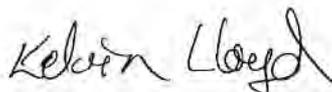
### **CONCLUSION**

In our opinion, the residual adverse effects of wetland vegetation clearance caused by track construction can be addressed by the positive effects of weed control over the 2,000 metre squared area centred on the wetland and its riparian margins. Overall, the ecological effects on the wetland should be no more than minor if these actions, and the actions suggested earlier, are undertaken with sufficient care and diligence.

It should be noted that these conclusions are made without the benefit of having visited the site.

Please don't hesitate to contact me if you require further input or discussion.

Yours sincerely



Kelvin Lloyd  
Principal Ecologist

### **REFERENCES**

- Beale Consultants 2018: Te Anau - Manapouri multi-purpose trail. Ecological assessment of Leg 6 wetland crossing. Prepared for the Fiordland Trails Trust.
- Robertson H.A., Ausseil A-G., Rance B., Betts H., and Pomeroy E. In press. Loss of wetlands since 1990 in Southland, New Zealand. *New Zealand Journal of Ecology* 43: in press.
- Wildland Consultants 2019a: Review of effects of Fiordland Trail on wetland values. *Wildland Consultants Ltd Contract Report No. 4957*. Prepared for Environment Southland.

Wildland Consultants 2019b: Review of effects of Fiordland Trail on wetland values.  
*Wildland Consultants Ltd Contract Report No. 4957b.* Prepared for Environment  
Southland.

**From:** Sonya Nicol <[sonya@slwp.co.nz](mailto:sonya@slwp.co.nz)>  
**Sent:** Friday, 12 April 2019 9:28 a.m.  
**To:** McSoriley, Luke <[luke.mcsoriley@wsp-opus.co.nz](mailto:luke.mcsoriley@wsp-opus.co.nz)>  
**Cc:** David Boniface <[dajeck@xtra.co.nz](mailto:dajeck@xtra.co.nz)>; Resource Consents <[ResourceConsents@es.govt.nz](mailto:ResourceConsents@es.govt.nz)>  
**Subject:** RE: Fiordland Trails Trust - APP-20191150

Yes, I consider that would be the best way to address that too.

Thanks

Sonya

**From:** McSoriley, Luke <[luke.mcsoriley@wsp-opus.co.nz](mailto:luke.mcsoriley@wsp-opus.co.nz)>  
**Sent:** Friday, 12 April 2019 9:17 AM  
**To:** Sonya Nicol <[sonya@slwp.co.nz](mailto:sonya@slwp.co.nz)>  
**Cc:** David Boniface <[dajeck@xtra.co.nz](mailto:dajeck@xtra.co.nz)>; Resource Consents <[ResourceConsents@es.govt.nz](mailto:ResourceConsents@es.govt.nz)>  
**Subject:** RE: Fiordland Trails Trust - APP-20191150

Good Morning

Thank you for your e-mail and for relaying the comments from Wildlands.  
The 10m requirement and inspection of the weed control should be fine and possibly these matters could be covered by conditions?  
If you require anything further from us please let me know.

Regards

**Luke McSoriley**  
Workgroup Leader - Planning

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**From:** Sonya Nicol <[sonya@slwp.co.nz](mailto:sonya@slwp.co.nz)>  
**Sent:** Friday, 12 April 2019 8:53 a.m.  
**To:** McSoriley, Luke <[luke.mcsoriley@wsp-opus.co.nz](mailto:luke.mcsoriley@wsp-opus.co.nz)>  
**Cc:** David Boniface <[dajeck@xtra.co.nz](mailto:dajeck@xtra.co.nz)>; Resource Consents <[ResourceConsents@es.govt.nz](mailto:ResourceConsents@es.govt.nz)>  
**Subject:** RE: Fiordland Trails Trust - APP-20191150

Hi Luke,

Wildlands Consultants Ltd (Kelvin) has advised that he supports the FTT revised proposal.

He suggested to avoid ambiguity, controlling weeds out to 10m either side of the trail (within the wetland area) would be better, rather than an 8-10 m range.

There would ideally be some performance standards, with inspection of the areas after control, to assess both the effectiveness of weed control, and that the control is not adversely affecting indigenous vegetation.

He would also support FTT continuing to discuss with the private landholder management of the willow trees, though notes that they can't commit to anything requiring third party permission unless they already have such permission.

Regards

Sonya

**From:** Sonya Nicol  
**Sent:** Thursday, 11 April 2019 5:06 PM  
**To:** 'McSoriley, Luke' <[luke.mcsoriley@wsp-opus.co.nz](mailto:luke.mcsoriley@wsp-opus.co.nz)>  
**Cc:** David Boniface <[dajeck@xtra.co.nz](mailto:dajeck@xtra.co.nz)>; 'Resource Consents' <[ResourceConsents@es.govt.nz](mailto:ResourceConsents@es.govt.nz)>  
**Subject:** RE: Fiordland Trails Trust - APP-20191150

Hi Luke,

Thanks for this. I have sent it on to Wildlands Consultants Ltd to get their comment on it. I will let you know the feedback once I have it.

Regards,

Sonya

**From:** McSoriley, Luke <[luke.mcsoriley@wsp-opus.co.nz](mailto:luke.mcsoriley@wsp-opus.co.nz)>  
**Sent:** Thursday, 11 April 2019 3:14 PM  
**To:** Sonya Nicol <[sonya@slwp.co.nz](mailto:sonya@slwp.co.nz)>  
**Cc:** David Boniface <[dajeck@xtra.co.nz](mailto:dajeck@xtra.co.nz)>  
**Subject:** Fiordland Trails Trust - APP-20191150

Hello Sonya

Thank you for sending through the additional assessment from Wildlands Consultants Ltd on the Fiordland Trails Trust application.

Fiordland Trails Trust is willing to remediate adverse hydrological effects on the wetland through pest plant management.

The Trust would like to amend the application to promote clearance of exotic pest species in order to increase indigenous plant dominance.

Attached is a document detailing the pest plant management works proposed.

The area of pest plant management detailed in the document is approximately 2000sqm in size.

The photograph below provides an indication of the extent of pest plants present in this area.

Unfortunately the grove of willow trees referenced in the additional Wildlands Consultants Ltd assessment are located on private land.

The Trust can and will discuss removal of these trees with the landowner but cannot commit to clearance of them as part of a resource consent process.

Please see answers below in response to your questions on the culverts.



Feel free to contact me if you have any further questions.

Regards

**From:** David Boniface <[dajeck@xtra.co.nz](mailto:dajeck@xtra.co.nz)>

**Sent:** Thursday, 11 April 2019 2:31 p.m.

**To:** McSoriley, Luke <[luke.mcsoriley@wsp-opus.co.nz](mailto:luke.mcsoriley@wsp-opus.co.nz)>

**Cc:** [simon@bealeconsultants.co.nz](mailto:simon@bealeconsultants.co.nz); [stephenhoskin@hotmail.com](mailto:stephenhoskin@hotmail.com); [julieburgess63@yahoo.co.nz](mailto:julieburgess63@yahoo.co.nz)

Alister Burgess <[julieburgess63@yahoo.co.nz](mailto:julieburgess63@yahoo.co.nz)>

**Subject:** Re: FW: Fiordland Trails Trust - APP-20191150

Hi Luke,

The two 800mm dia culverts are each 6 metres long and are made of polyethylene.

Attached also is a sketch and our offer of additional noxious weed eradication work that may offset the influence the trail has on the wetland.

---

Happy to discuss.

Regards

David

On 11 April 2019 at 13:49 "McSoriley, Luke" <[luke.mcsoriley@wsp-opus.co.nz](mailto:luke.mcsoriley@wsp-opus.co.nz)> wrote:

Hi David

A couple more questions.

Ta

Luke

**From:** Sonya Nicol <[sonya@slwp.co.nz](mailto:sonya@slwp.co.nz)>  
**Sent:** Thursday, 11 April 2019 1:46 p.m.  
**To:** McSoriley, Luke <[luke.mcsoriley@wsp-opus.co.nz](mailto:luke.mcsoriley@wsp-opus.co.nz)>  
**Cc:** Resource Consents <[ResourceConsents@es.govt.nz](mailto:ResourceConsents@es.govt.nz)>  
**Subject:** Fiordland Trails Trust - APP-20191150

Hi Luke,

When you come back with that other information from the FTT/Simon B this afternoon, can you please also confirm the length of the two culverts under the trail – the width is 800mm in the application. Can you please also confirm if they are e.g. plastic culverts, or if not, what they are made from.

The other culverts based on the photos you provided are 400mm x 6 metres

Thanks

Sonya

**SONYA NICOL**

**Southern Land & Water Planning**

T 027 505 0077 | E [sonya@slwp.co.nz](mailto:sonya@slwp.co.nz) | W [www.slwp.co.nz](http://www.slwp.co.nz)



RESOURCE CONSENTS | POLICY ADVICE | LANDSCAPE ASSESSMENTS & PLANS | FARM ENVIRONMENT PLANS | DOC CONCESSIONS

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**RE: s92 Further information request - Fiordland Trails Trust**

Hi Sonya

Thank you for the update.

The culverts in the wetland require resource consent under Rule 74 of the pSWLP and form part of the Trail. We have sought resource consent under Rule 74 of the pSWLP for wetland modification.

As the application is retrospective all affected parties have a good understanding of what has been constructed including the culverts.

We also note that the culverts in the wetland are permitted under the RWP. As noted in the response to the RFI the culverts meet the permitted conditions of Rule 28 of the RWP.

Given the permitted status, what environmental effects associated with the culverts could be of a concern? We don't consider updated written approvals or further consultation necessary.

Regards



**Luke McSoriley**

Workgroup Leader - Planning

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**From:** Sonya Nicol <[sonya@slwp.co.nz](mailto:sonya@slwp.co.nz)>

**Sent:** Tuesday, 2 April 2019 9:08 a.m.

**To:** McSoriley, Luke <[luke.mcsoriley@wsp-opus.co.nz](mailto:luke.mcsoriley@wsp-opus.co.nz)>

**Cc:** Resource Consents <[ResourceConsents@es.govt.nz](mailto:ResourceConsents@es.govt.nz)>

**Subject:** RE: s92 Further information request - Fiordland Trails Trust

Hi Luke,

Thanks for the revised information. I will get Kelvin to review it, and provide updated technical comments on if the amendments and conditions proposed will overcome his original assessment that the effects on the wetland from the trail are more than minor.

One question for you – with the application now also seeking consent for the culverts, are you/ have you sought updated approvals from DOC, F&G and TAMI? I note in their approvals they looked at photos of the trail but it didn't include the culvert plan you have just submitted?

Thanks

Sonya

**From:** McSoriley, Luke <[luke.mcsoriley@wsp-opus.co.nz](mailto:luke.mcsoriley@wsp-opus.co.nz)>

**Sent:** Monday, 1 April 2019 2:16 PM

**To:** Sonya Nicol <[sonya@slwp.co.nz](mailto:sonya@slwp.co.nz)>

**Cc:** Resource Consents <[ResourceConsents@es.govt.nz](mailto:ResourceConsents@es.govt.nz)>; David Boniface <[dajeck@xtra.co.nz](mailto:dajeck@xtra.co.nz)>  
**Subject:** RE: s92 Further information request - Fiordland Trails Trust

Hello Sonya

Please find attached a response to the request for further information.

Regards



**Luke McSoriley**

Workgroup Leader - Planning

---

WSP Opus, Opus House, 65 Arena Avenue, Invercargill 9810, New Zealand  
PO Box 647, Invercargill 9840, New Zealand

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**From:** Sonya Nicol <[sonya@slwp.co.nz](mailto:sonya@slwp.co.nz)>  
**Sent:** Thursday, 7 March 2019 1:05 p.m.  
**To:** McSoriley, Luke <[luke.mcsoriley@wsp-opus.co.nz](mailto:luke.mcsoriley@wsp-opus.co.nz)>  
**Cc:** Resource Consents <[ResourceConsents@es.govt.nz](mailto:ResourceConsents@es.govt.nz)>  
**Subject:** s92 Further information request - Fiordland Trails Trust

Hello Luke,

Further to our conversation this week, please find attached a s92 further information request for Leg 6 of the Fiordland Trails Trust application.

Also, I don't have appear to have an email address for the Fiordland Trails Trust contact for this application – can you please confirm it for me?

Please don't hesitate to contact me with any questions.

Regards

Sonya

**SONYA NICOL**

**Southern Land & Water Planning**  
T 027 505 0077 | E [sonya@slwp.co.nz](mailto:sonya@slwp.co.nz) | W [www.slwp.co.nz](http://www.slwp.co.nz)

## Appendix D – Forms A & B

# Application for Resource Consent (PART A)

This application is made under Section 88 of the Resource Management Act 1991



The purpose of this Part A form and the relevant Part B form(s) is to provide applications with guidance on information that is required under the Resource Management Act 1991. Please note that these forms are to act as a guide only, and Environment Southland reserves the right to request additional information.

To: Environment Southland  
Private Bag 90116  
Invercargill 9840

### Full name, address and contact details of applicant (in whose name consent is to be issued)

Name: See application

Address: See application

Email: See application

Phone: See application *Preferred* Additional Fax: \_\_\_\_\_

### Consultant contact details (if different from above)

Contact name/agent: See application

Address: See application

Email: See application

Phone: See application *Preferred* Additional Fax: \_\_\_\_\_

Please tick the box for the consent(s) you are applying for and complete the relevant Part B form(s) where available:

See Application - Wetland Modification

Land Use	Discharge	Coastal
<input type="checkbox"/> Bore/well	<input type="checkbox"/> To air	<input type="checkbox"/> Whitebait stand
<input type="checkbox"/> New or expanded dairy farming	<input type="checkbox"/> To water	<input type="checkbox"/> Structures/occupation of space
<input type="checkbox"/> Effluent storage	<input type="checkbox"/> To land	<input type="checkbox"/> Removal of natural materials
<input type="checkbox"/> Cultivation	<b>Water</b>	<input type="checkbox"/> Disturb foreshore/seabed
<input type="checkbox"/> Tree planting	<input type="checkbox"/> Take and use surface water	<input type="checkbox"/> Discharge/deposit substances
<input type="checkbox"/> Gravel extraction	<input type="checkbox"/> Take and use groundwater	<input type="checkbox"/> Commercial surface water activity
<input type="checkbox"/> Feed-pad, wintering pad, calving pad or silage pad	<input type="checkbox"/> Dam water	<input type="checkbox"/> Reclaim/drain foreshore/seabed
<input type="checkbox"/> Riverbed activity	<input checked="" type="checkbox"/> Divert water	<input type="checkbox"/> Marine farming
<input type="checkbox"/> Bridges and culverts		<input type="checkbox"/> Other coastal activities

1 Are there any **current** or **expired** consents relating to this proposal?

Yes  No

If yes, please provide consent number(s) and description:

APP-2019-1150  
(Refer attached RCA)

2 Are any other consents required from Environment Southland or **other authorities**?

Yes  No

If yes, please state the relevant authority and the type of consent(s) required:

App-2019-1150  
(Refer attached RCA)

3 For what **purpose** is this consent(s) required: (e.g. discharge of effluent, gravel extraction etc.)

See application

4 **Location** of proposed activity

Address: See application

Legal Description: See application

Map Reference (NZTM 2000): See application N

5 The name and address of the **owner /occupier**: (if other than the applicant)

Name: See application Phone: See application

Address: See application

6 Please attach a map or a coloured aerial photograph, showing at a minimum, the location of the proposed activities.

See application

## 7 Assessment of effects on the environment (AEE)

Please complete the applicable Part B form(s) for the proposed activities. For those activities where no Part B form is available, please attach a written statement that assesses the effects that your activities may have on the environment. An assessment of effects **must** include the following information:

- (a) *if it likely that the activity will result in any significant adverse effect on the environment, a description of any possible alternative locations or methods for undertaking the activity;*
- (b) *an assessment of the actual or potential effect on the environment of the activity;*
- (c) *if the activity includes the use of hazardous substances and installations, an assessment of any risks to the environment that are likely to arise from such use;*
- (d) *if the activity includes the discharge of any contaminant, a description of—*
  - (i) *the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and*
  - (ii) *any possible alternative methods of discharge, including discharge into any other receiving environment;*
- (e) *a description of the mitigation measures (safeguards and contingency plans where relevant) to be undertaken to help or prevent or reduce the actual or potential effect;*
- (f) *identification of the persons affected by the activity, any consultation undertaken, and any response to the views of any persons consulted;*
- (g) *if the scale and significance of the activity's effects are such that monitoring is required, a description of how and by whom the effects will be monitored if the activity is approved;*
- (h) *if the activity will, or is likely to, have adverse effects that are more than minor on the exercise of a protected customary right, a description of possible alternative locations or methods for the exercise of the activity (unless written approval for the activity is given by the protected customary rights group).*

You should also include:

- (a) *an assessment of the activity against any relevant provisions of any relevant objectives, policies, or rules;*
- (b) *any information specified to be included in the application in accordance with the relevant regional plan;*
- (c) *for an application to replace an existing consent, an assessment of the value of the investment of the existing consent holder:*

An assessment of effects **must** address the following matters:

- (a) *any effect on those in the neighbourhood and, where relevant, the wider community, including any social, economic, or cultural effects;*
- (b) *any physical effect on the locality, including any landscape and visual effects;*
- (c) *any effect on ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity;*
- (d) *any effect on natural and physical resources having aesthetic, recreational, scientific, historical, spiritual, or cultural value, or other special value, for present or future generations;*
- (e) *any discharge of contaminants into the environment, including any unreasonable emission of noise, and options for the treatment and disposal of contaminants;*
- (f) *any risk to the neighbourhood, the wider community, or the environment through natural hazards or the use of hazardous substances or hazardous installations.*

**8 Affected Parties**

Please attach written approval from parties who may be affected by your activity. *Written Approval of an Affected Party* forms are available on the Environment Southland website. During the processing of your application, Council may determine that additional approvals are required.

**9 Correspondence from Council when using a consultant**

It is standard practice that both you and your consultant are copied into all correspondence relating to the consent process. This is so that you know what is going on with your application. Please let us know below if you would like us to only contact your consultant. This means you will only hear from us when your application is/is not accepted, when a decision is made or if we feel that you need to be contacted.

I want all correspondence about my application to go to my consultant only  Yes  No

**10 Site visit from the Consents Team**

See application

Consents staff are able to meet with you, visit your site and see what you are proposing to do. We find that this is beneficial to everyone involved. The cost of the visit will be included in the total cost of processing your consent. However, we find that applications that have an on-site visit are processed with less congestion and at a similar or lesser overall cost. Please let us know below if you would like us to come and see your site.

I would like a member of the Consents Team to visit my site  Yes  No

**11 How much will it cost to process my application?**

The cost of a consent depends on the complexity of the activities. Staff time is charged out at a rate of \$145/hr and vehicle use for site visits is charged at \$0.73/km (inclusive of GST).

The fees shown below under section two are **deposits to be paid at the time of application**. Due to the complexity of these activities, this deposit will not usually cover the full cost of processing the application. **Further costs may be incurred** relating to staff time, disbursements, legal charges, consultation fees, and hearing commissioner fees. Environment Southland’s User Charges and Fees document is available at:

[www.es.govt.nz/fees-and-charges](http://www.es.govt.nz/fees-and-charges)

When the consent has been processed you will receive an invoice for an additional fee, or for a refund.

The Council’s user charges are fixed under Section 36 of the Resource Management Act 1991. Our fee schedule is:

<b>1. Fixed fee:</b>	
Bores and wells	<b>\$290</b>
Whitebait stand	<b>\$220</b>
<b>2. Deposit:</b>	
All other non-notified applications including: <ul style="list-style-type: none"> <li>• Certificates of compliance</li> <li>• Changes to consent conditions (variations)</li> <li>• Change of lapse date</li> </ul>	<b>\$1,500</b>
Applications that require notification or limited notification	<b>\$2,000</b>

**How to pay**

Environment Southland accepts payment in the forms of cash, Eftpos, cheque, or electronic transfer. All electronic transfers must include the applicant’s name and “consent application” as a reference. Please make electronic payments to: Environment Southland, 01-0961-0018998-00.

**User Charges**

Please note that additional Annual User Charges will apply to all consents. These are payable in advance on the first day of July each year. Tables 4, 5 and 6 of the Environment Southland User Charges and Fees Schedule outlines the fees associated with Annual Administration Charges and Annual Consent Monitoring and Inspection Charges. Table 7: Annual Research and Monitoring Charges applies only to surface and groundwater takes and comprises the following:

- **Surface water takes (per consent, for volumes up to 50,000 m<sup>3</sup>/day):**
  - A charge of **\$1.89** per year per cubic metre authorised as a maximum daily take.
  - Minimum of **\$138**, maximum of **\$7,585**.
- **Surface water takes (per consent, for volumes over 50,000 m<sup>3</sup>/day):**
  - **\$0.0031** per cubic metre authorised as a maximum daily take.
- **Groundwater takes (per consent):**
  - A charge of **\$0.89** per year per cubic metre.
  - Minimum of **\$162**, maximum of **\$1,782**.

Municipal and stock water discount (of 50%) no longer applies.

**12 Checklist: Have you included the following?**

- |                                     |  |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | Payment of the required deposit ( <i>see fee schedule</i> )  |
| <input checked="" type="checkbox"/> | Written approval from all potentially affected parties ( <i>forms available from the Environment Southland website</i> ) |
| <input checked="" type="checkbox"/> | Site plan/location map/sketch of the proposed activity   |
| <input type="checkbox"/>            | N/A A copy of the Certificate of Incorporation ( <i>where applicant is a company</i> )                                   |
| <input checked="" type="checkbox"/> | Part B form(s) specific to your activity and/or a separate assessment of environmental effects (AEE)                     |

**Note:**

(a) *If your application does not contain the necessary information and the appropriate fee, Environment Southland must return the application.*

**Signature of applicant**

***I hereby certify that to the best of my knowledge and belief, the information given in this application is true and correct.***

***I undertake to pay all actual and reasonable application processing costs incurred by Environment Southland.***

Name (block capitals) See application

Signed \_\_\_\_\_ Date See application

***(Signature of applicant or person authorised to sign on behalf of applicant)***

# Application to Dam or Divert Water (PART B)

This application is made under Section 88 of the Resource Management Act 1991



A complete Part A form needs to be provided with this Part B form. The purpose of this Part B form is to provide applicants with guidance on information that is required under the Resource Management Act 1991. These forms are to act as a guide only and Environment Southland reserves the right to request additional information. Please also refer to Appendix A of the Regional Water Plan for Southland, 2010.

1 What is the application for?

<input checked="" type="checkbox"/>	To divert water	<input type="checkbox"/>	The renewal of existing diversion consent number: <u>N/A</u>
<input type="checkbox"/>	To dam water	<input type="checkbox"/>	The renewal of existing dam consent number: _____

Please note that if the diversion or dam requires the alteration of the bed or banks of a lake or watercourse, a Land Use Consent is also likely to be required. Please refer to the relevant Part B Form.

This form is not for water takes. Please refer to the relevant Part B Form to take surface water or groundwater.

2 For what purpose(s) will the water be dammed or diverted?

Refer attached resource consent application and AEE.

3 What type of water body do you intend to dam or divert?

<input type="checkbox"/> River/stream	<input type="checkbox"/> Modified watercourse	<input type="checkbox"/> Lake	<u>Wetland</u>
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4 What is the name of the water body of the proposed dam or diversion? If the water body is unnamed then please note this and state which water body it flows into.

N/A

5 What are the GPS co-ordinates of the point(s) you propose to dam/divert water?

Refer attached resource consent application

Point 1: NZTM 2000 \_\_\_\_\_ E \_\_\_\_\_ N

Point 2: NZTM 2000 \_\_\_\_\_ E \_\_\_\_\_ N

6 Please describe your proposed method to dam or divert water:

Refer to attached resource consent application

7 If you answered *river, stream, or modified watercourse* above, please answer the following:

- (a) What is the average channel width nearest to the proposed dam/diversion? \_\_\_\_\_ metres
- (b) What is the channel depth nearest to the proposed dam/diversion? N/A metres
- (c) What is the minimum flow – determined as per Appendix K of the proposed Southland Water and Land Plan? \_\_\_\_\_ l/sec

8 If you answered *lake* above, please answer the following:

- (a) What is the surface area of the lake? \_\_\_\_\_ N/A
- (b) What is the average depth of the lake? \_\_\_\_\_ N/A
- (c) What is the main source of water that fills the lake?

Rainfall

Groundwater/springs

Streams/ivers

9 Does your proposed damming or diversion of water have any associated wastewater discharges?  
If yes, please describe below:

Yes

No

Please note that a discharge into the environment may require a resource consent application to be made specifically for the discharge (please refer to the relevant Part B form).

**Existing Environment**

10 Are any of the following features found within the existing environment of the proposed activity? Describe these features in the space below, along with details of the assessment undertaken to determine the presence of these features.

- (a) Signs of instream life (e.g. fish, eels, bullies, crayfish, native birds, frogs)?
- (b) Areas where food is gathered from a water body (e.g. watercress, eels, wildfowl)?
- (c) Wetlands, wildlife habitats or bird nesting habitats (e.g. swamp areas)?
- (d) Other activities occurring in the area (e.g. commercial activity, fishing, swimming, boating)?
- (e) Areas of particular aesthetic, cultural, heritage or scientific value (e.g. archaeological sites)?
- (f) Waste discharges, water takes and/or monitoring sites?

Yes	No
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

*Refer attached resource consent application*

Please also include a map or aerial photograph showing the following details:

- the location(s) of the proposed activities
- the location of any structures
- the location of any existing points of take for other water users
- the total property area boundary
- distances to any discharge activities
- other surface water bodies nearby (including wetlands) and the distance to them

***Assessment of Effects***

11 Will the damming or diversion have any effects on the following:

- (a) Water quality, including temperature
- (b) Water availability and reliability to other users
- (c) River and stream flows
- (d) Water levels in any other water body (including wetlands)

Yes	No
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

For those answered **No** above, please describe why there will be no effect. For those answered **Yes**, please describe how these effects may occur.

Refer to attached resource consent application

12 Based on the assessment of minimum flow, as per Appendix K of the proposed Southland Water and Land Plan (pSWLP), please assess the following:

- (a) In situations where the total volume of surface water allocation is between 10 and 30 percent of the Q95 at any downstream point in the catchment as determined by the Southland Regional Council, please include an assessment of effects using *Method 1 - Assessment using Generalised Habitat Models*, as per Appendix K of the pSWLP; or
- (b) In situations where the total volume of surface water allocation will breach 30 percent of the Q95 at any downstream point in the catchment as determined by the Southland Regional Council, please include an assessment of effects using *Method 2 - Assessment using Instream Habitat Flow Incremental Methodology*, as per Appendix K of the pSWLP.

N/A

- 13 How will the proposed activity affect the overall environment in the short term? For example, how does the establishment of your proposed activity (including any construction and watercourse or waterbody disturbance) affect the environment, particularly in terms of land disturbance and waterbody behaviour (i.e. where does any disturbed water and soil end up?)

Refer to attached resource consent application

- 14 Please consider the long term effects that your proposed diversion or damming of water may have on the surrounding environment.

Refer to attached resource consent application

- 15 Are there any structures near to the proposed activity? If yes, will the proposed activity have any effect on these structures? Please provide specific details including the type of structure, owner of the structure, distance from the proposed activity, and what effects the proposed activity will have on the stability/function of the structure.

Refer to attached resource consent application

- 16 Pursuant to Schedule 4 of the Resource Management Act, 1991, there are a number of matters that must be addressed by an assessment of environmental effects. Please discuss what effects the proposed activity will have on the following:

- (a) any effect on those in the neighbourhood and, where relevant, the wider community, including any social, economic, or cultural effects

Refer to attached resource consent application and ABE.

(b) any physical effect on the locality, including any landscape and visual effects

Refer to attached RCA.

(c) any effect on ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity

See attached RCA.

(d) any effect on natural and physical resources having aesthetic, recreational, scientific, historical, spiritual, or cultural value, or other special value, for present or future generations

See attached RCA.

(e) any discharge of contaminants into the environment, including any unreasonable emission of noise, and options for the treatment and disposal of contaminants

See attached RCA.

- (f) any risk to the neighbourhood, the wider community, or the environment through natural hazards or the use of hazardous substances or hazardous installations

Refer attached RCA.

- 17 Please include a description of the monitoring or mitigation measures (including safeguards and contingency plans where relevant) to be undertaken to help avoid, reduce, remedy or mitigate the actual or potential effects on environmental features and values.

Refer attached RCA.

- 18 Please include a description of any possible alternative locations or methods for undertaking the activity and why these alternatives have not been selected.

Refer attached RCA

- 19 Please include evidence of any consultation undertaken for this application. This may include (but not be limited to) consultation with adjoining landowners, other consent holders in the immediate area, iwi (e.g. Te Rūnanga O Ngāi Tahu, Te Ao Marama Inc.), government departments/ministries (e.g. DOC), territorial authorities and recreational associations.

Refer to attached RCA

Please note that in accordance with Schedule 4 of the RMA, you may also be required to provide an assessment of whether or not the proposed activity is contrary to any of the relevant provisions of the following documents:

- (a) Regional Policy Statement for Southland, 1997*
- (b) Proposed Southland Regional Policy Statement, 2012 (and any proposed/ subsequent versions)*
- (c) Regional Water Plan for Southland, 2010*
- (d) Proposed Southland Water and Land Plan, 2016 (and any proposed/ subsequent versions)*
- (e) National Policy Statement for Freshwater Management, 2014*
- (f) National Environmental Standard for Sources of Human Drinking Water, 2007*

Staff are able to advise whether this is required, as it is dependant on the location, scale and complexity of your proposal. We invite you to come in for a pre-application meeting with Environment Southland consents staff to discuss this.

**END OF FORM**

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[www.wsp-opus.co.nz](http://www.wsp-opus.co.nz)