

BEFORE THE CANTERBURY REGIONAL COUNCIL

IN THE MATTER OF

The Resource Management Act 1991

AND

IN THE MATTER OF

an application by **Southdown Holdings Limited**  
filed under **CRC040836** for a land use consent  
to disturb the bed and banks of Lake Ohau and  
Maori Creek to construct and maintain an  
irrigation pump station, intake and pipeline.

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REPORT AND DECISION OF HEARING COMMISSIONERS PAUL ROGERS,  
MICHAEL BOWDEN, DR JAMES COOKE AND EDWARD ELLISON

PART B - SITE SPECIFIC DECISION

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## **1 INTRODUCTION**

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- 1.1 This is a decision on an application by **Southdown Holdings Limited** (the applicant). It is one of many decisions we have made on 104 applications by various applicants for water permits and associated consents in the Upper Waitaki Catchment.
- 1.2 The decision should be read in combination with our Part A decision, which sets out our findings and approach to various catchment wide issues that are common to multiple applications. References to our Part A decision are made throughout this decision as appropriate.

## **1 THE PROPOSAL**

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- 1.1 The applicant proposes to construct operate and maintain infrastructure to pump irrigation to its property at Glen Eyrie downs. There are two separate parts to the proposal:
- (a) Construct, maintain and operate an irrigation pump station and intake on the bed of Lake Ohau (at our about map reference NZMS 260 H38:621-522); and
  - (b) Construct and maintain a pipeline underneath Maori Creek (at or about map reference NZMS 260 H38:617-512)
- 1.2 The intake structure will be a gravel gallery consisting of two 85 metre long, 1 metre diameter screens laid horizontally beneath the bed of Lake Ohau, and parallel to the shoreline. Natural lake bed material will be overlain, water from the screens will be collected in a sump or collector well, which will be located in a pumping station on the shore (buried) of Lake Ohau.
- 1.3 The pipeline from Lake Ohau to Glen Eyrie will be approximately 900 mm in diameter and 3.3 km long, it will be buried on the Shelton Downs property parallel to the Shelton Downs boundary with the QEII Covenant which is located in the neighbouring Fiver Rivers Ltd property Ohau Downs. It will be buried with a minimum cover of 600 mm so that it is not exposed to the base of the channel of Maori Creek and the ephemeral waterway of Red Lagoon and any other ephemeral waterway that it crosses. Maori Creek will be restored to its natural state following excavation.
- 1.4 There will be no stockpiling of spoil on the banks of the creek. Best management practices will be implemented to minimise:
- (a) disturbance of the bed of Maori Creek;
  - (b) sediment entering the creek; and
  - (c) erosion of creeks banks.
- 1.5 Works will be undertaken in autumn and winter when flows in Maori Creek are lowest and majority of works will be undertaken above the water level.
- 1.6 The proposal also involve a temporary diversion of water during construction of the intake structure to minimise the work required in flowing water. Although a consent for this diversion has not specifically been sought, we have considered this activity as part of the proposal for the reasons outlined in our Part A decision.

### **The application**

- 1.7 The application is for an activity in the bed of a lake or river pursuant to section 13 of the RMA. Consent is required under the Natural Resources Regional Plan (NRRP), as discussed below.

- 1.9 The application (CRC040836) was lodged with the Canterbury Regional Council (the Council) on 23<sup>rd</sup> October 2003. The application was publicly notified and there were a number of submissions that are referred to later in this decision. The application is for a new activity and requested a consent duration of 35 years.

#### **Modifications after notification**

- 1.10 The application was modified after notification from two buried or submerged steel intake pipes running from a pump station into Lake Ohau, the pipes were to be fitted with a 5 mm mesh screen, and the lake edge would have required protection works to ensure bank stability.
- 1.11 The proposal was modified to a buried gravel gallery designed to NIWA best practice fish screening guidelines and to address a number of concerns, including entrainment of fish. The main features of the gallery include:
- (a) Invisible to fish;
  - (b) Low approach velocity (0.005-01 m/s);
  - (c) Depth of about 2 m to the top of the collector pipe/screen; and\
  - (d) Bed material will form the natural cover.
- 1.12 The general principle for modifications after notification is that amendments are allowed provided they do not increase the scale or intensity of the activity or significantly alter the character or effects of the proposal. The key consideration is prejudice to other parties by allowing the change. In this case, we are satisfied that the change does not significantly alter the intensity or effects of the proposal and that no party would be adversely affected by allowing the change.

#### **Related consents and applications**

- 1.13 This application is closely related to an application by the applicant to take and use from Lake Ohau for spray irrigation of up to 2,068 hectares at Glen Eyrie Downs (CRC040835). Our findings on that application and comment on other related applications are provided in a separate decision.

## **2 DESCRIPTION OF THE ENVIRONMENT**

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- 2.1 The proposed works are sited in the bed of Lake Ohau at the southwestern end of Maori Bay (gravel gallery), Maori Bay (pump house) and a pipeline in a southerly direction along the eastern edge of Shelton Station next to the QEII covenant in the Ohau Downs Station, passing through the bed of Maori Creek. Maori Bay has high recreational values being a semi enclosed and attractive bay at the extreme southern point of Lake Ohau. Maori Bay is approximately 3.8 km due west of the Ohau River outlet, the site of the Fivers Rivers proposed water intake structure.
- 2.2 Lake Ohau is identified as a Recommended Area of Protection, site of outstanding Regional and National Significance and Site of Special Wildlife Importance, described below.
- 2.3 Sutherland-Downing and Elley (2004) lists the following recreational values for Lake Ohau:
- (a) Good water quality, high scenic and natural appeal.
  - (b) Sightseeing, walking, picnicking, camping and swimming.
  - (c) Water sports including jet/power boating, water skiing, jet skiing, canoeing/kayaking and sailing.
  - (d) Angling and hunting for trout and water fowl.

- 2.4 Daly (2004) summarises the values of Lake Ohau;
- (a) Lake Ohau is an excellent example of glacial lakes in the area.
  - (b) The lake has a distinctive milky blue colour.
  - (c) Aquatic plant (threatened species) *Crassula multicaulis* present.
  - (d) Feeding, roosting and breeding habitat for deep and shallow water waders, waterfowl, gulls and terns and banded dotterel.
  - (e) Feeding and roosting habitat for open water divers, riparian species, black stilt and black-fronted terns, and feeding habitat for Southern crested grebe.
  - (f) Koaro, upland and common bullies, long finned eels and common smelt.
  - (g) High value habitat for brown and rainbow trout.

2.5 Keller and Pfluger (2005) states:

*“Large L-shaped glacial lake. Only large lake within the ecological region which has not had its level raised. Lake and margins provide waterfowl and wader habitat for a number of species including southern crested grebe, wrybill, black stilt, NZ scaup and black-fronted tern. Important for indigenous fish and notably koaro.*

2.6 In addition, the applicant notes the following in their application:

- (a) The land is currently used for low intensity sheep and cattle farming.
- (b) Outflows and lake levels of Lake Ohau are primarily controlled by MEL.
- (c) Maori Stream flows in a north-easterly direction through Ohau Downs towards Lake Ohau.
- (d) Lake Ohau has a statutory acknowledgement in the Ngai Tahu Claims Settlement Act 1998.
- (e) Maori Creek appears to have limited environmental value.
- (f) Algal communities and some invertebrate species are present.

### Site Visit

2.7 We detailed our site visits in Part A and we do not repeat this information here other than to say our site visit was an aerial view of Maori Bay by helicopter. During our land based visit we drove along the Ohau Road to Maori Creek, Maori Creek had the appearance of a clean and healthy creek.

## 3 PLANNING INSTRUMENTS

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- 3.1 As discussed in our Part A decision, there is a wide range of planning instruments that are relevant under the RMA. This includes national and regional policy documents, along with regional and district plans. The key planning instruments relevant to this application are as follows:
- (a) Natural Resources Regional Plan (NRRP);
  - (b) Proposed Canterbury Regional Policy Statement (PCRPS); and
  - (c) Canterbury Regional Policy Statement (CRPS)

(d) Waitaki District Plan (WDP)

3.2 The provisions of these planning instruments critically inform our overall assessment of the application under s104(1)(b) of the RMA, as discussed in Section 14 of this decision. In addition, the rules within the relevant planning instruments determine the status of the activity, as set out below.

#### **Status of the activity**

3.3 In our Part A decision we provide a detailed discussion of our approach to determining the status of activities. We now apply that approach to the current application.

3.4 This application is listed in Schedule 2 of the Resource Management (Waitaki Catchment) Amendment Act 2004. Section 88A of the RMA therefore does not apply and the relevant plan for determining the status of this activity is the operative NRRP.

3.5 The relevant provisions of the NRRP are as follows:

(a) Rule BLR4 – The activity will not comply with condition 1 of this rule as Maori Creek is in the high naturalness category of tributaries of Lake Ohau and so is in Schedule BLR6.

(b) Rule BLR5 – The activity will not comply with condition 1 of this rule as Maori Creek is in the high naturalness category of a tributary to Lake Ohau and so is in Schedule BLR6.

(c) Rule BLR7 - The activity does not comply with condition 1, but is likely to comply with conditions 2 and 7, therefore the activity is discretionary.

3.6 In relation to the minor diversion of water associated with construction activities, the relevant plan for determining the status of the activity is the WCWARP. The diversion fails to qualify as a permitted activity under Rule 1 of the WCWARP due to the quantity and rate of water being diverted. However it complies with all other relevant rules in the WCWARP and therefore requires consent as a **discretionary** activity.

3.7 Based on the above, we consider the proposal is a **discretionary activity** and resource consent is required in accordance with sections 13 and 14 of the RMA.

#### **4 NOTIFICATION AND SUBMISSIONS**

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4.1 The application was publicly notified on 4 August 2007 at the same time as the related water permit application. Twenty submissions in total were received on the land use application, including:

(a) 3 in support;

(b) 15 in opposition; and

(c) 2 neither in support nor opposition.

4.2 Most of the submissions related to the large scale "water take and use" effects arising from the proposed use of Lake Ohau water, rather than the "land use" use application to construct an intake structure and pipeline. The key submissions that raised issues with the current application were from the Blue Family Trust, Dr Molloy (QEII National Trust) and Meridian Energy. The submitter's evidence is discussed in more detail later in this Decision.

#### **5 THE SECTION 42A REPORT**

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5.1 A report on the application and submissions was prepared by the Regional Council's consents investigating officer Claire Penman. The S42A report was pre-circulated in advance of the hearing. Specific points noted from the s42A report are summarised below.

### Effects on man-made structures

- 5.2 Ms Penman used CRC's GIS system to confirm that there were no man-made structures located within the vicinity of the proposed works. Ms Penman concluded that provided mitigation measures are adopted to avoid effects on erosion or flood-carrying capacity, potential effects of the installation and maintenance of the intake and pipeline on man-made structures would likely be minor.

### Effects on amenity, recreation and other users

- 5.3 The S42A report noted that an adjacent property owner in Maori Bay (Blue Family Trust) had made a submission in opposition with concern about the noise from the pumping station that may affect the peaceful surroundings of Maori Bay and the visibility of the pump station, associated infrastructure and access track to users of the lake.

### Effects on landscape

- 5.4 In his S42A Report on landscape effects, Mr Glasson concluded that the visible pump station and intake pipe on the edge of Lake Ohau could have adverse effects on landscape values. However he considered that locating the pump house in a discrete and recessive location and locating the intake pipe underground could reduce the adverse effects to an acceptable level.

### Effects on other users

- 5.5 Lands Information NZ made a submission noting that Southdown Ltd will require an easement under section 60 of the Land Act 1948.

## **6 THE APPLICANT'S CASE**

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- 6.1 Legal counsel for the applicant, Mr Whata presented the opening submissions relating to the Southdown Holdings Ltd mix of consents, within which the intake structure and crossing of Maori Creek application was included. The expert witnesses whose evidence included briefs relating to the intake structure and crossing of Maori Creek proposals were as follows:
- (a) Mr Ian McIndoe, soil and water engineer
  - (b) Mr Greg Ryder, freshwater ecologist
  - (c) Ms Ruth Bartlett, botanist
  - (d) Mr John Kyle, planner

### **Opening legal submissions**

- 6.2 Mr Whata advised that the Intake Structure has been assessed against the PNRRP and that Rule BLR2 provides for the erection or placement of structures as a permitted activity provided that conditions are met. However if conditions are not met Mr Whata advised that the activity then falls to be assessed as a discretionary activity pursuant to rule BLR8.
- 6.3 Mr Whata noted that as the NRRP is not operative that the application also needs to be assessed against the TRP, which is silent on locating structures within the beds and margins of lakes and rivers.
- 6.4 Mr Whata addressed the concerns raised in the Officers S42A report, which identified;
- (a) Water quality and ecosystems
  - (b) Amenity, recreation and other users

(c) Tangata whenua values

Sedimentation

7.5 A temporary wall (bund) will be constructed from trenched material to create working area and contain sedimentation effects.

Amenity, recreation and other users

6.6 The applicant considers that through appropriate construction methodology that the adverse effects on amenity and recreation through sediment will be less than minor and will be limited in duration.

Tangata whenua

6.7 Mr Whata noted that in the evidence of Mr Richard Peacocke on behalf of the owners, Southdown Holdings Ltd, gave details of consultation with Ngai Tahu. Mr Peacock records that Ngai Tahu representatives during the site visit did not wish to view the take points on Lake Ohau.

6.8 Further MR Whata noted that Mr Mikaere presented cultural evidence that no mahinga kai have been identified in Lake Ohau, such that the impact on customary fisheries will be less than minor.

6.9 Mr Whata noted that Ngai Tahu main concerns at the hearing are related to the degradation of water quality and in particular to the Ahuriri Arm and Lower Tekapo River and Haldon Arm of Lake Benmore. He concludes that it is fair to conclude that tangata whenua concerns related to the land use component of the proposal are limited.

**Mr McIndoe, Soil and Water Engineer**

6.10 Mr McIndoe, Soil and Water Engineer, outlined changes made to the application since being notified in on 4 August, 2007;

Gallery Construction

6.11 The proposed gallery will consist of two 85 m long, 1 metre diameter screens laid horizontally beneath the bed, and oriented parallel to the shoreline. The gallery will be buried and natural lake bed material used to cover it, the depth of the gallery below the bed depends on the level of water ingress, but will be sufficiently deep to prevent the effects of bed scour. It is estimated the base of the screens will be 3 m below the bed level. Water will be collected in a sump or collector well, which will be located on the shore of Lake Ohau, approximately 20 metres away from the highest expected flood level.

6.12 The gallery will be designed to comply with NIWA best practice fish screening guidelines and to address a number of concerns, including the entrainment of fish, main features include, invisible to fish, low approach velocity (0.005-0.1 m/s), depth of 2 m to the top of the collector pipe/screen and bed material will form the natural cover.

6.13 Water will be conveyed from the gallery on the lake shore to the irrigation area through approximately 3.3 km of pipeline with a diameter of 0.9 m. The pipeline will extend from the pump station in Maori Bay, through Shelton Downs to the irrigation area, and will be buried with a minimum of 400 mm of cover.

Pipeline

6.14 The pipeline will be installed on the northern side of the Shelton Downs boundary fence, rather than the southern side through the Ohau Downs and Blue properties, that is the pipeline will not be installed within the Ohau Downs QEII covenant area, or through the property owned by Mr DS and ML Blue.



### Road and stream crossings

- 6.15 The main supply pipeline conveying water from the lake to the irrigation area is proposed to cross Lake Ohau Road at or about map reference H39:615-511.
- 6.16 The location of the Maori Creek pipeline crossing has changed slightly from H38:617-512 to H38:616-512. The applicant proposes to install the pipeline beneath the bed of Maori Creek. The pipeline will be installed by diverting flow across to one half of the creek, digging the trench, laying the pipe and back filling. Water will then be diverted across to the other side of the creek where the pipeline installation will be repeated as for the first half. If possible works will be undertaken during autumn and winter when the flows in Maori Creek are at their lowest, and the risk of floods are low.
- 6.17 The proposed pipeline will be buried to such a depth (minimum 600 mm cover below the stream bed) so that none of the pipe will be exposed in the base of the stream channel. Both the stream and riparian vegetation will be restored to as much as possible their previous state following excavation. Mr McIndoe considers the method of installation and mitigation measures will ensure the effects are minor.
- 6.18 Mr McIndoe told us that the proposed pipeline will also be installed beneath the bed of the ephemeral waterways that the pipeline crosses in the same manner as that undertaken for Maori Creek. The ephemeral waterways will be restored to a state similar to that prior to works being undertaken.

### Pumping station and shed

- 6.19 There are two pump stations proposed, one utilising submersible or lime shaft pumps, the other utilising standard centrifugal pumps. The submersible pump will be located 25-30 m from the lake shore within Crown Land, the underground booster pump will be located on Shelton Downs property. Both pump stations are proposed to be located underground.
- 6.20 Mr McIndoe advised that once detailed field work has been carried out to determine the water lift required, it may be determined that one pump will suffice.
- 6.21 Key features of the proposed underground submersible pump shed are:
- (a) It will be located approximately 2 m above the highest expected lake level;
  - (b) Water will be gravity feed into the bottom of the pump chamber;
  - (c) It will house the hydraulic and electrical control systems for the pumps and pipelines;
  - (d) It will include backflow prevention to stop water flowing back to Lake Ohau through the pipeline and pumps;
  - (e) It will be buried underground, so that it is not generally visible; and
  - (f) The pumps will provide enough pressure to supply water to the main pumping station.
- 6.22 Mr McIndoe submitted that with the pumps being underground, the effects of noise will be mitigated. The biggest cause of noisy pumps is cavitation caused by inappropriate suction characteristics, the pumps will be operating with a flooded suction and will not suffer from this problem. Pumps will all be run by electric motors, which create little noise.
- 6.23 Mr McIndoe told us that Network Waitaki will be upgrading the power line from S8 to Lake Ohau and will install a substation adjacent to the cattle stop at the boundary of Shelton Downs and Ohau Downs.

### Intake construction methodology

- 6.24 Mr McIndoe informed us that the gallery will be placed a maximum of 3.3 m below the bed, using perforated or slotted pipes, the trench will be backfilled with appropriately sized, clean filter pack material to just below the existing lake bed level.
- 6.25 To enable construction to take place a trench will be dug and the excavated material will be used to create a temporary wall to establish a working area. Partial dewatering of the area will be required. The area of excavation will be a maximum of 3.3 m deep, 4 m wide, and 180 m long parallel to the lake shore. Standard earth moving equipment will be used, the collector pipe placed in the trench, and backfilled with graded gravel. Natural lake bed material will form the final cover over the area. Excess spoil from the works will either be spread out over the lake bed to represent the current state, or will be removed.
- 6.26 The supply line will be installed by digging a trench along the proposed pipeline route, approximately 1.2 m – 1.5 m deep, and up to 2 m wide. The pipeline will be laid in the trench, which will be back filled with the excavated material, the area of works will be restored to a state consistent with the surrounding area.
- 6.27 The duration of the works will be in the order of 2-4 weeks, and will be carried out during daylight hours.

### Lake Turbidity

- 6.28 To minimise the effects of sedimentation, works will be carried out during periods of low to moderate wave action, the short term nature of the works will keep effects to a confined period of time and no long term adverse effects should arise.
- 6.29 The works will not be carried out in weekends or public holidays to reduce the turbidity effects affecting other users. All practical effects and best practice will be used to minimise disturbance of the lake bed, sediment entering the lake and erosion of the lake bed and banks.

### Existing structures

- 6.30 The closest structures to the proposed intake is the Ohau River weir, approximately 3.8 km east of the works, given the distance the effects are considered to be minor.

### Flood carrying capacity

- 6.31 Mr McIndoe told us the only structure proposed to be installed within the lakebed is the bed mounted gallery, which will be buried beneath the lake gravels, this is therefore unlikely to affect the flood carrying capacity of the lake.

### Fish and Instream Values

- 6.32 Mr McIndoe advised that the works to be carried out in the Maori Creek bed will be over a short period of time, fish passage will be maintained though out the duration of the proposed works and no storage of fuel or refuelling of any vehicles and machinery will occur anywhere on the bed of the river, thereby ensuring contaminants will not enter flowing water.

### **Dr Greg Ryder – Aquatic ecology**

- 6.33 Dr Greg Ryder, water quality scientist and aquatic ecologist provided expert advice on the potential effects of the proposed activity on aquatic and avifaunal values.
- 6.34 Dr Ryder submitted that there will be some disturbance of birds during construction due to noise and removal of vegetation, but as the site is already modified the effects are expected to be short term and of a minor nature. In respect of the pipeline, the habitat along the pipeline is not of the type valued by any of the rare or endangered bird species present in the Mackenzie basin. Dr Ryder recommended that construction should avoid

the main avifauna breeding season, August to December, and the unavoidable removal of any large trees due to constraints associated with the pipeline alignment should be undertaken with consultation with the Department of Conservation.

- 6.35 Dr Ryder advised us that the installation of the pipeline below the bed of Maori Creek may directly remove macroinvertebrates and less mobile fish (e.g; common upland bully and larvae), but more mobile fish (e.g; adult bully and Canterbury Galaxias) will be able to move to avoid the area during construction. Some macroinvertebrate taxa will also drift downstream to avoid areas with increased sediment deposition (e.g; mayflies). There is likely to be a short term increase in fine sediments downstream of the excavation area, but this will decrease over time. Recolonisation will begin almost immediately following the completion of works by macroinvertebrates and fish, and take up to six months to achieve normality.
- 6.36 The pipeline to be laid from Lake Ohau to Glen Eyrie and does not cross any waterways (other than Maori Creek), no adverse effects of pipeline construction on waterways are anticipated.
- 6.37 Local aquatic communities will be disturbed during the lake bed construction, macro invertebrates and macrophytes on the lake bed within the proposed intake gallery site will be directly removed or displaced during excavation. Some fish such as bullies and bully eggs may also be removed but more mobile fish will quickly move to avoid the area. Macrophytes and less mobile fish will be affected by elevated suspended sediment levels, however this will be a temporary effect. Dr Ryder considered that benthic macroinvertebrates and fish will begin to re-colonise the area after construction work concludes, and be back to normal levels after up to six months.
- 6.38 To control the introduction of weeds to the waterways during construction of the intake, machinery will be thoroughly washed prior to works being undertaken and after works have been completed to minimise the risk of any weed introduction.
- 6.39 Dr Ryder submitted that Environment Canterbury's best practice guidelines to reduce sediment inputs to water courses during construction should be followed. The gallery intake design should be effective at screening a wide range of fishes including adult and juvenile salmonid's, such that effects on lake fisheries will be less than minor.

#### Ms Ruth Bartlett – Botanist

- 6.40 Ms Bartlett's evidence describes the vegetation in the vicinity of the fence line along side which the pipeline is to be buried. A mixture of exotic and indigenous tussock grasslands and shrubland comprising briar, matagouri, native broom, manuka, cocksfoot grass, sweet vernal, birds foot trefoil, fescue tussock, woolly mullein and occasional bracken are found.
- 6.41 On the steep gravelly slope that leads down to the foreshore scattered matagouri dominates the vegetation. A dense band of devaricating shrubs lines the lake shore, and includes occasional kowhai, amongst matagouri, manuka briar. While white leaved lawyer bush is a common component of vegetation.
- 6.42 Uphill of this shrub band this vegetation continues as patchy shrubland and tussock grassland, extending back over this hummocky hillside to Lake Ohau Road.
- 6.43 On the lake shore exists a shrubland behind a cobbles – boulder beach. The shrubland comprises matagouri, briar rose, *Coprosma propinqua* and *Meliccytus alpines*, small kowhai trees and occasional saplings and scattered *Coprosma Crassifolius*
- 6.44 On the cobble beach are scattered *Coprosma*, *Meliccytus alpines*, *Muehlenbeckia axillaris* and grazed sedges, rushes and grasses along with herbs such as *Gonocarpus micranthus*, *Viola sp*, *Pratia angustifolia* and *Geranium sessiliflorum*.
- 6.45 Ms Bartlett told us that as the pipeline and pump station will be located underground and that the vegetation can be re-established in these areas after construction is complete.

- 6.46 Ms Bartlett notes that construction of the pumphouse and pipeline from the Lake Ohau shoreline up the hill and into the irrigation area will require the limited clearance of vegetation. That vegetation is part of a matrix of oversown tussock grassland and shrubland, it is grazed and subject to heavy rabbit pressure. The vegetation and area does not possess any values that would elevate it in importance above the large area of surrounding similar vegetation.
- 6.47 Ms Bartlett concludes that the extent of activities proposed is very limited and the effects will be ameliorated by rehabilitation after the construction is complete.

#### **Mr Brown – Landscape architect**

- 6.48 As part of his overall assessment of the proposal, Mr Brown assessed the Lake Ohau water intake structures and pipeline connections to the applicant's property. Mr Brown opined that when viewed from the DoC Reserve and a gravel access way near the lake's canal gate and channel, the intake and pipeline would have very limited exposure to the wider landscape and potential audiences.

## **7 SUBMITTERS**

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### **Blue Family Trust**

- 7.1 The Blue family as a group presented evidence supporting their opposition to the proposed construction of an intake structure in the bed of Lake Ohau, pump house and pipeline. The Blue Family Trust (BFT) were represented by Jennifer Howey, Susan Simpson, Maryanne Clark, Margaret Blue, Mary-Lou Blue and Donald Blue explained in their evidence that they have a long association with Lake Ohau area and Maori Bay (the applicant's proposed point of take which is also known as Boat Harbour) in particular. They explained that Don Blue purchased the Ohau Downs Station in 1954 and together with his wife Marylou (the Blue's) lived worked and raised their family of 5 children there.
- 7.2 In 1983 the Blue's subdivided off 50 acres as a development block for their family (BFT block). The BFT block fronts onto Lake Ohau in the centre of Maori Bay with a 300 m lake frontage. The BFT explained that on BFT block's west boundary is Shelton Downs and its east border is the QEII covenanted block of Ohau Downs.
- 7.3 The BFT regularly use the site for holidays and picnics, at least 7 or 8 times a year. The family expressed a passion for the site and the enjoyment they get from going to this site, a place of solace and wonderful memories, a place of beauty and peacefulness. "This block is a jewel in the crown of our family".
- 7.4 Ms Mary Louise Blue noted that the 50 acres is next to but not part of the QEII Block (which their son John registered in 1995), to correct an impression that the application on the ECAN website portrays. Ms Mary Blue also noted that the photographs in the application incorrectly identify the BFT block as part of the QEII covenant area.
- 7.5 Ms Mary Blue and family members expressed concern at the lack of response from Southdown Holdings Ltd to requests for information. Ms Blue told us that the proposed water intake and pumping station was on their west boundary, and attempts to address this issue with the representatives of Southdown Holdings Ltd met with limited or no response.
- 7.6 The concerns for the BFT are the potential unsightly and noise intrusion into what is a picturesque, peaceful and safe harbour. Access to the bay is by boat or through private land, and is used by families and children, the BFT were concerned for the safety of children who might venture close to the intake.
- 7.7 The area is zoned 'Rural Scenic' and is regarded as an 'Outstanding Natural Landscape' in the Waitaki District Plan. Ms Blue expressed concern about the noise effects of a pump house power supply infrastructure might have on their line of view.

- 7.8 Ms Blue asked that the structures if granted not be seen or heard, although she thought that might be difficult to achieve given the large amounts of water to be moved and the predominant NW wind which would convey the noise to them. Ms Blue stated that "Boat Harbour" was a natural amphitheatre such that any sound will have limited attenuation.
- 7.9 The pump station will be most active during the summer months when the BFT are in "residence" in their tents, the constant hum will they said seriously detract from the amenity value of their property.
- 7.10 The BFT family submitted that they strongly believe that the water access point should not be within Maori Bay (Boat Harbour), and that access for the water intake on easier terrain exists to the west of Maori Bay. Mr Peacocke in response to this suggestion indicated that the owner of Shelton Station, Mr Errol Williams was not prepared to consider an easement away from that previously agreed on the boundary line.

#### Dr Molloy, QEII National Trust

- 7.11 Dr Molloy submitted (2007) his concern that the route of the pipeline might pass through the QEII open space covenant on Ohau Downs and requested that the pipeline be repositioned on the western side of the Shelton Downs and Ohau Downs boundary fence. The applicant proposes that the pipeline conveying the Ohau Water to the irrigation area will be buried on the Shelton Station side of the boundary fence with Ohau Downs and therefore alleviates the concern of Dr Molloy.

#### Meridian Energy

- 7.12 Mr Turner for Meridian Energy expressed concern at the potential effects on the Lake Ohau minimum level of 519.45 m.a.s.l could occur as a result of maintenance, works or upgrading of existing infrastructure. We consider the proposed establishment of an intake structure in Maori Bay will not have a direct effect on the lake level of Lake Ohau.

### **8 UPDATES TO THE SECTION 42A REPORTS**

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- 8.1 Ms Penman noted that on all matters to do with erosion, water quality, riparian plants, animals and cultural values that the applicant had not provided final details.
- 8.2 Ms Penman noted she was satisfied with the applicants proposal to include a gallery screen designed in accordance with the NIWA Guidelines. However she also quotes Dr Merediths S42A addendum statement that these type of structures require careful scrutiny of design, installation, and maintenance, to ensure adequate performance is maintained. Once installed such installations are very difficult to assess or review, so it is appropriate that conditions require explicit demonstration of appropriate construction phases. Ms Penman advises that amendments to currently proposed conditions will be required to provide for this staged evidence demonstrating compliance with the NIWA guidelines.
- 8.3 Ms Penman acknowledges the further information on noise levels provided by Mr McIndoe, and suggests that a condition be included on the consent requiring the noise level to be limited in some way to protect the amenity values of Maori Bay for neighbours and other users.
- 8.4 Ms Penman acknowledged that Mr McIndoe had advised that the proposed gallery will be 170m in length along the lake shore and buried to a depth of at least 2m, he had also outlined the mitigation measures proposed to minimise the effects on water quality, erosion and riparian plants and animals, Ms Penman indicated that she was satisfied the proposed method of construction and mitigation measures will ensure the above effects are minor.
- 8.5 Ms Penman also noted that Mr Kyle had provided conditions for the proposed land permit, but considered further detail of the construction methods need to be included in the scope to ensure that the works are carried out as proposed in the evidence of Mr McIndoe.

- 8.6 Dr Meredith in his addendum refers to the advice he provided based primarily on the NIWA Report "Fish Screening: Good Practice Guidelines for Canterbury" published in 2007. The guide he notes arose primarily out of the poor and inconsistent state of intake screening on existing and proposed irrigation intakes in Canterbury. While the gravel gallery is more appropriate than the original design that Southdown Holdings Ltd proposed, the greatest unknown with galleries is the ongoing operation and maintenance requirements to maintain structural and operational integrity. It is important Dr Meredith opines to ensure that the conditions require explicit demonstration of appropriate construction phases (by inspection and photographic evidence).

## 9 APPLICANT'S RIGHT OF REPLY

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### Mr Whata

- 9.1 Mr Whata responded to the noise concerns of the BFT that *"the noise (and vibration) will be a significant hum against a background of extremely low noise"*, by stating that Southdown Holdings Ltd would comply with the Waitaki District Plan noise standards, which allows a noise level outside normal working hours of 40db Laeq, which can be thought of as an average sound level of 40 decibels. Given that pumps generally produce a steady sound, it is an appropriate measure for environmental noise.
- 9.2 Secondly Mr Whata in response to the BFT concern re *"The pipeline, powerpoles, unless underground, will be unsightly and in our direct line of vision of the lake"*. Mr Whata advised that infrastructure associated with the intake structure will be underground. Mr Whata also advised that the applicant had accepted the recommendation by Mr Brown to undertake mitigation by restoration of land around and above the Lake Ohau intake and pumping structure, including the lake margins.

### Mr McIndoe

- 9.3 Mr McIndoe noted that Ms Penman and the Blue Family Trust (BFT) expressed concern about pump noise for the applicant's proposed intake in Maori Bay. He noted that Ms Penman had recommended a condition be included on the consent to limit noise levels. He also noted that members of the BFT stated that they camp and picnic about 50 m from the proposed pump station (assuming that the pump station is on the boundary fence).
- 9.4 Mr McIndoe stated that water will be taken from the middle of the gallery about 85 m from the boundary fence. He added that the pump station will be located about 20 m from the lake frontage and will be about 100 m from the BFT picnic area.
- 9.5 Mr McIndoe acknowledged that large pump stations can be noisy, (up to 90-110 db) and is generated from a combination of fluid noise and mechanical noise. Mr McIndoe acknowledged that the Black Point pump station referred to in the BFT submission is an example of a noisy system, but his understanding is that the problem has been addressed.
- 9.6 Control of pump noise is well understood by pump engineers and it is relatively straight forward to mitigate the effects of noise and vibration according to Mr McIndoe. He added that good pump selection and pump design will reduce mechanical and fluid noise substantially. Furthermore, buildings with good insulation and double wall construction would reduce noise by up to 70% and vibration isolators will reduce both noise and the effect of vibration. On top of this Mr McIndoe noted that the pumps are planned to be housed underground, further reducing noise.
- 9.7 In addition, measures such as keeping the pump station as far as possible from the BFT picnic area and maintaining trees between the station and picnic area will also control noise. He noted that there is a 6db reduction in sound level when doubling the distance from the source.
- 9.8 Mr McIndoe supported Ms Penman's view that a condition be included that limits noise levels for the proposed intake. He noted that the Waitaki District Plan specifies an allowable noise level outside of normal working hours of 40 dB. Given that pumps

generally produce a steady sound, he added that it is an appropriate measure to use for environmental noise.

- 9.9 Mr McIndoe proposed that at the Sheldon Down boundary, which he understand is 50 m away from the BFT camping site, the maximum level of noise generated by the pump station shall not exceed:
- (a) 55dB LAeq during the daytime (7am to 9pm Monday to Saturday),
  - (b) 40dB LAeq at night-time (being the period between the hours of 9pm on any night and 7am the following day and includes 24 hours on Sundays and statutory holidays).
- 9.10 Mr McIndoe noted that other Councils such as Dunedin City Council apply similar limits (40dB) in rural areas at night time at a notional boundary. They define a notional boundary for rural areas as being 50 m from a dwelling.
- 9.11 Mr McIndoe noted that Mrs Blue suggested that a sound level of even 20 dB would be too loud in her circumstances. According to Mr McIndoe that is a very low sound level. He provided some examples of different noises and their approximate dB ranges. He noted that in his opinion the wind blowing through trees, should the wind be blowing from the NW, will significantly exceed those sound levels.

#### **Dr Ryder**

- 9.12 Dr Ryder concurred with Dr Freemans (S42A) comments that the revised gallery intakes are now more acceptable and subject to appropriate design, installation, and maintenance scrutiny to ensure fish exclusion performance is maintained. Dr Ryder considered the performance criteria proposed by Ms Vesey to be suitable for inclusion in the conditions.
- 9.13 Dr Ryder commented that Dr Allibones (DoC) concerns surrounding intake screening for fish appear to relate to cumulative effects, but that he accepts that effects will be less than minor for individual takes. Dr Allibones concern relate principally he thought to the larval koaro which migrate downstream from headwaters to the lake, they are generally widespread throughout the S.I and migrate in high flows in relation to the ratio of abstraction, such river flow will be high so he does not see the risk of entrainment into galleries as significant under such conditions.

## **10 STATUTORY CONTEXT**

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- 10.1 As already noted, the proposed activity is a **discretionary** activity the NRRP. The relevant statutory context for discretionary activities is set out in detail in our Part A decision. In accordance with those requirements, we have structured this evaluation section of our report as follows:
- (a) Evaluation of effects
  - (b) Evaluation of relevant planning instruments
  - (c) Evaluation of other relevant s104 matters
  - (d) Section 104D jurisdictional hurdles
  - (e) Part 2 RMA
  - (f) Overall evaluation

## 11 EVALUATION OF EFFECTS

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- 11.1 Drawing on our review of the application documents, the submissions, the Officers' Reports, the evidence presented at the hearing and our site inspection, we have concluded that the effects we should have regard to are:
- (a) Water quality and ecosystems
  - (b) Flood carrying capacity and erosion
  - (c) Amenity, recreation and other users
  - (d) Tangata whenua values
  - (e) Positive effects

### Water quality and ecosystems

- 11.2 The principle effects on water quality and ecosystems will be generated during the short period involved in the proposed construction activity of the intake structure. The effects on the water quality of the natural glacial fed lake waters would come from sediments created through construction works occurring in the lake waters, principally during the establishment of a bund designed to prevent contamination of the disturbed trench water dispersing directly into the lake. The activity of removing the temporary bund and returning of the lake bed to its original condition will also result in sedimentation dispersing to the waters of the lake and river.
- 11.3 The applicant proposes to establish a temporary bund prior to excavating the 140 metre trench for the intake structure, this will limit the sedimentation to the period of bund construction and deconstruction at the end of the works. The work will be timed to a period when lake levels are at a lower level.
- 11.4 Dr Merediths S42A addendum stated that gravel gallery intakes are preferred to the original proposal put forward by the applicant. Compliance with the ECAN "Fish Screening: Good Practice Guidelines for Canterbury" report will give some assurance that the gravel gallery fish screening structure will meet guideline standards.
- 11.5 The short period involved in the Maori Creek bed works and the maintenance of a constant flow at all times will mitigate potential effects, there is likely to be a short term increase in sediments during construction which will cause fish and some macrophyte taxa to move downstream from the area affected by the works. Dr Ryder submitted that this would be short term and re-colonisation would start almost immediately after construction ceases.
- 11.6 The S42A report advocates an exclusion period for construction be extended to avoid the season opening, salmonoid spawning and incubation period. Decontamination of equipment to prevent disturbance or spreading of didymo growths during construction should also apply.
- 11.7 The intake structure as described by Mr McIndoe is designed to safely screen a wide range of fish sizes, including adult and juvenile salmonids, consequently the effects on lake fisheries are expected to be less than minor.
- 11.8 The effects of clearing an area for the construction of a pump house and pipeline will result in the removal of a small but obvious (after removal) area of vegetation, the physical and visual results of the clearance are likely to persist for a lengthy time due to slow growth rates in that locality.
- 11.9 The clearance of cut vegetation to prevent it entering the lake waters and ensuring refueling of machinery does not occur in or near the lake edge to prevent contamination of lake water.



- 11.10 The short duration involved in constructing a passage for a pipeline under Maori Creek, the methodology used to minimize the adverse effects of the activity and the limited effect on in situ biota of the creek will ensure that the effects of the proposed activity is minor.
- 11.11 The completion and acceptance of a Construction Management Plan by Canterbury Regional Council prior to construction commencing will be an important factor in establishing the best practice standards recognised by Canterbury Regional Council and ensuring that the adverse effects of the proposed activity on water quality and ecosystems are less than minor.

#### **Flood carrying capacity and erosion**

- 11.12 The gravel gallery and pipe to the onshore pump station will be buried and covered with natural lake bed gravels, there will be no exposure of the structure or pipe to weather or wave action so we consider the effects to be minor.
- 11.13 The burial of the pipe beneath the bed of Maori Creek will be an activity of short duration and post construction should have less than minor effect on the flood carrying capacity or erosion of the bed and banks of Maori Creek.

#### **Amenity, recreation and other users**

- 11.14 The potential effects on amenity, recreational and other users would predominantly be through the limited access during the construction period. It is accepted that exclusion from the construction site will be necessary for reasons of safety. The actual period of construction will however be relatively short (2-4 weeks). The applicant proposes that further mitigation measures include construction occurring during daylight hours and avoiding works on weekends and public holidays. There will be visual evidence of the pipeline route post the construction phase as plant and surface rehabilitation for a time as the site heals, the effects however we consider will be less than minor.
- 11.15 The attractive and peaceful setting of the "Boat Harbour", Maori Bay for families including the neighbouring property owners the Blue Family is harder to reconcile. The sound of the electric pump operating around the clock will have an adverse effect on the tranquillity of the site and experience that the site held for those who go there. The proposal to limit the sound effects to 40 db at the Shelton Station boundary with the Blue family property will mitigate in part the sound effect, but not reinstate the experience they are seeking to retain. The Blues suggest that the applicant seek an alternate site further west outside of the bay. This is an attractive and reasonable proposition but Mr Peacocke advises the owner of Shelton Station on whose property both options are proposed, will not consider any alternative other than the current option along the boundary line of Shelton Station which is an equally reasonable expectation.
- 11.16 It does seem that Maori Bay is a natural harbour and ideally suited to day time recreationalists as well as the long established Blue family enjoyment. The placement (buried) of a commercial infrastructure will leave a temporary to lasting visual effect on the landscape principally due to the slow recovery rate of shrubs and rehabilitation of vegetation in this area.
- 11.17 The area of the proposed activity is located in an area classed as an Outstanding Landscape Area in the Waitaki District Plan. The landscape values of the site are most apparent when viewed from the lake or from Maori Bay itself, access to the site over land is across private property so the opportunity to visit or see the site via land access is limited.
- 11.18 The principal issue here is that of noise caused by the pump at boat harbour (other issues are addressed under landscape effects). The Blue Family Trust use land adjacent to the harbour for camping and picnics in summer months. They argued that a noise restriction of 40 db is too permissive as during still summer nights such noise would be disruptive. We note the Waitaki District Plan specifies an allowable noise level outside of normal working hours of 40 dB and we accept Mr McIndoe's evidence that this is an appropriate

limit for background environmental noise. Given the Blue Family are intermittent users of the site, there is not good reason to require a lower noise threshold.

- 11.19 We also acknowledge the Blue Family Trust's concerns that the pumps and pipeline will be visible from Lake Ohau and their land in Maori Bay. However Mr McIndoe's evidence assures us that this will not be the case as the pumps will be submerged, and the pipeline buried. We are confident that any such effects could be avoided through suitable conditions.

#### **Tangata whenua**

- 11.20 Ngai Tahu did not lodge a submission specific to this application, although a generic submission opposing all applications in the Mackenzie Basin was lodged by Ngai Tahu. The proposed mitigation measures designed to minimise effects of sedimentation on river and lake waters and ecosystem's will also be of benefit to tangata whenua interest.
- 11.21 The names Maori Bay and Maori Creek are indicative of a connection to tangata whenua, the natural shelter and camp sites at Maori Bay might point to an historical association. Mrs Louise Blue in her submission noted that a Maori archaeological site had been identified at Maori Bay no further detail had been provided.
- 11.22 The inclusion of the condition of an accidental discovery protocol will assist in addressing the potential for unearthing koiwi or other taonga during earthworks.

#### **Diversion of water**

- 11.23 In respect of the diversion associated with construction of the intake, it is over a short length, will be temporary in nature and returns to the same watercourse it is originally part of. Given the nature of the activity, we are satisfied that the effects will be no more than minor. However we consider that it is necessary to impose some brief conditions of consent to ensure that the extent of the diversion is clearly defined and the activity is managed appropriately

#### **Key conclusions on effects**

- 11.24 In relation to the actual and potential effects of the proposal, our key conclusions are as follows.
- 11.25 The activity will have a short term effect on water quality and after the establishment of the temporary bund this will reduce to less than minor until the de-installation period at the end of construction. Mitigation of effects can be enhanced by timing construction to occur during seasonally low lake levels and at a time that least effect's the angling, local fishery spawning and incubation period.
- 11.26 The modification to install a gravel gallery and a requirement to follow the established guidelines in constructing the fish screen will enhance the effectiveness of the fish screen.
- 11.27 The effects on access will be short term and can be mitigated by declaring limits on work hours and avoidance of works on public holidays and weekends. Noise and visual effects of the construction activity will be short term, however the landscape effects of a "line" through the vegetation is likely to persist for some time unless effort is applied to re-establishing vegetation cover.
- 11.28 We conclude that the mitigation proposed by the applicant of burying the pump station coupled with the proposed distance of the pump from the BFT camping site, that the effects of the proposed activity on the amenity and recreational values of the site will be no more than minor.
- 11.29 The adverse effects on the bed, banks, water and ecosystems of Maori Creek will be of a short duration, a constant flow will be maintained, at all times, there will be some displacement of fish and macrophytes, however re-colonisation will be immediate.

- 11.30 In conclusion we find that subject to mitigation measures identified above and the completion of a Construction Management Plan to be approved by the Canterbury Regional Council prior to start of construction that the temporary activity will ensure the activity will have a less than minor effect on the lake, creek, ecosystems and recreational values.

## **12 EVALUATION OF RELEVANT PLANNING INSTRUMENTS**

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- 12.1 Under s 104(1)(b) of the Act, we are required to have regard to the relevant provisions of a range of different planning instruments. Our Part A decision provides a broad discussion of those planning instruments and sets out the approach we have applied to identification and consideration of the relevant provisions.
- 12.2 In relation to the current application, we consider that the key relevant provisions can be found in Chapter 6 of the NRRP, which relates to activities in the beds of lakes and rivers. The chapter contains one objective and two related policies.
- 12.3 Objective BLR1 aims to ensure that works in the beds and banks of lake, rivers and streams can be undertaken while minimising effects, including flood-carrying capacity, natural character, ecosystems, other structures, erosion, and Ngai Tahu values. Given the conclusions we have reached on these matters above, we consider that, subject to appropriate conditions, the proposal is consistent with this objective.
- 12.4 In respect of the proposed diversion, given its minor nature and our conclusions on effects outlined above, we consider that the activity is consistent with the relevant objectives and policies in the WCWARP seeking to sustain the quality of the environment.

## **13 EVALUATION OF OTHER RELEVANT S104 MATTERS**

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- 13.1 Under s104(1)(c), we are required to have regard to any other matter that we consider to be relevant and reasonably necessary to determine the application. After hearing all the relevant evidence, we consider that no such matters exist in relation to this application.

## **14 PART 2 RMA**

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- 14.1 Section 104(1) states that the matters which we have discussed above are subject to Part 2, which covers section 5 through section 8 inclusive. These sections are set out in full in our Part A decision and are discussed below in the context of the current application.

### **Section 6 – Matters of National Importance**

- 14.2 We consider the short term duration of the proposed activity coupled with the fact that the gallery structure and pipeline will be buried below the surface of the lake bed or land surface will ensure that the natural character of the area will not be compromised.
- 14.3 The removal of a small area of indigenous and exotic vegetation to create an access way for the construction equipment, corridor for the pipeline and site for a pump house will create a visual effect that will be remediated by surface repair and over time by the gradual regrowth of vegetation of the affected area at the end of the construction period.
- 14.4 Access to the area will be restrained during the construction phase of 2-4 weeks, the short duration and avoidance of work at night or public holidays will mitigate this issue.
- 14.5 The proposed mitigation measures to minimise effects on the water quality and ecosystems of the area will also mitigate the potential impact on tangata whenua values for the area.

### **Section 7 – Other Matters**

- 14.6 The principle of kaitiakitanga has been observed to the extent that the applicant has consulted with Ngai Tahu and sought to understand Ngai Tahu values on the wider issues

associated with the take and use of water. Mitigation and best practice standards required for this proposed activity will result in less than minor effects on tangata whenua values.

- 14.7 The ethic of stewardship has been followed with respect to the applicant's proposed mitigation measures to minimise the effects on the local waters and ecosystems. The proposal to develop a Construction Management Plan which is to be approved by the Canterbury Regional Council prior to construction further consolidates the principle of stewardship.
- 14.8 The short duration of the activity and measures to mitigate effects on amenity and intrinsic ecosystem values and restoration of the affected area back to as close to original as possible will result in adverse effects being less than minor.
- 14.9 The short term effect on the intrinsic ecosystems of the activity, and effectiveness of the fish screening mechanism recognises clause (d).
- 14.10 Maintenance and enhancement of the environment, the proposed activity will allow the environment to return to its original condition, with mitigation, remedial work and natural re-colonisation and vegetative regrowth mean the environment should return to close to its former state within a reasonable period of time and therefore is consistent with clause (f) of section 7.
- 14.11 The lasting impact on the natural and physical resources of the local environment will be less than minor due to the short term duration of the proposed activity, confined corridor for works on land and the burial of the pipeline.
- 14.12 The timing of the construction to avoid opening season, spawning, incubation and the mitigation measures of a temporary bund coupled with the short duration of the construction activity will result in a less than minor effect on the habitat of trout and salmon. The fish screening provided by the gallery will be effective at protecting small fish from entry into the intake structure.

### **Section 8 – Treaty of Waitangi**

- 14.13 Section 8 of the RMA has a cascading effect on the development for regional and district plans in so far as they affect the Upper Waitaki through integration of Ngai Tahu values into the respective objectives and policies. The applicant has consulted with Ngai Tahu, contributed to the development of a cultural impact assessment and the engagement of Mr Buddy Mikaere to assist individual farms with relating the findings to their property. Ngai Tahu made a property inspection, but chose not to have a look at the site of this proposed activity. We consider the mitigation measures proposed including the protection for water, ecosystem and vegetative values will ensure that tangata whenua values are not unduly harmed.

### **Section 5 – Purpose of the RMA**

- 14.14 Turning now to the overall purpose of the RMA, that is, "to promote the sustainable management of natural and physical resources".
- 14.15 The applicant has proposed mitigation measures designed to confine effects of sedimentation on lake and river water to a brief period during the construction of a temporary bund.
- 14.16 The intake structure is proposed to be being buried beneath the natural gravels of the bed of Lake Ohau. Although there is a possibility that the structure might be buried on the beach beside the lake if the rate of water infiltration can equal the rate of take required. The mitigation measures proposed and the application of best practice standards will ensure a less than minor effect on the lake.
- 14.17 Laying of the pipeline will involve disturbance to the bed and banks of Maori Creek, the construction will be for a short duration and restoration of the creek to as much as possible its original character such that the cumulative effect will be less than minor.

- 14.18 The activity will require the removal of a small area of native vegetation which will have a more lasting visual effect due to the slow regrowth rates of shrubs and tussocks in that environment. Restoration of the disturbed surface area of the construction site and pipeline will be an important mitigation factor, coupled with proactive vegetation restoration will mitigate the long term effects.
- 14.19 Public access and enjoyment of the area will for a short period of time will be restricted during the 2-4 week construction phase, there will be a lingering visual effect as re-vegetation of the area of earth works occurs over time. The adverse effects with remediation measures will be less than minor.

## **15 OVERALL EVALUATION**

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- 15.1 Under s104B of the RMA, we have a discretion as to whether or not to grant consent. This requires an overall judgment to achieve the purpose of the Act and is arrived at by:
- (a) Taking into account all the relevant matters identified under s 104;
  - (b) Avoiding consideration of any irrelevant matters;
  - (c) Giving different weight to the matters identified under s 104 — depending on our opinion as to how they are affected by the application of s 5(2)(a), (b), and (c) and ss 6-8 — to the particular facts of the case; and then in light of the above; and
  - (d) Allowing for comparison of conflicting considerations, the scale or degree of conflict, and their relative significance or proportion in the final outcome.
- 15.2 The principle effects of the proposed activity will arise from the construction of the gravel gallery in the lake bed and the dispersal of suspended sediments in the vicinity of the works out into the lake. The removal or movement of fish and biota to avoid the effects of sediments will have a localised impact that will in part be mitigated by the placement of a protective bund to contain sediments and avoid dispersal into the wider lake.
- 15.3 Similarly the modification of the bed of Maori Creek to lay a pipeline will have an immediate effect on fish and biota within and below the construction area, sedimentation arising from the construction activity will drift down stream and result in some adverse effect on the ecosystems of Maori Creek.
- 15.4 The duration of the works are relatively short, 2-4 weeks for the intake structure and much less for the pipeline under Maori Creek, this is a mitigating factor. The requirement for a Construction Management Plan to be approved by Canterbury Regional Council prior to construction will ensure compliance with best practice in the construction and effective function of the gravel gallery and minimising effects of the in stream and lake bed activity.
- 15.5 The landscape effects will be remediated by the burial below surface level of all pipeline and pumping station infrastructure. The remediation of vegetative cover will be subject to the slow growth patterns of shrubs and native vegetation in that area and will result in a visual effect that will be gradually absorbed into the local landscape vista, such that the adverse effects will be minor.
- 15.6 We do not envisage that the proposed activity will have an adverse effect any more than minor on the neighbouring QEII Covenant in the Ohau Downs property.
- 15.7 The adverse effects on amenity and recreational values are less easy able to be mitigated, the principal issue being noise of the electric pump. The applicant proposes to bury the pump, and advise the pump will be located 100 m from the Blue family camp site. The noise level is proposed to be within the standards required of the Waitaki District Plan. Maori Bay is a natural and attractive bay suited to recreational use and we have no doubt of high importance to the regular users including the Blue family. The compatibility of the two activities in a remote and peaceful part of Lake Ohau is such that the adverse effects of the proposed activity are of concern to the BFT, we however consider the effects with the proposed mitigation will be no more than minor.

15.8 Having reviewed the application documents, all the submissions, taking into account the evidence to the hearing and taking into account all relevant provisions of the RMA and other relevant statutory instruments we have concluded that the outcome which best achieves the purpose of the Act is to grant consent.

## 16 DECISION

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16.1 Pursuant to the powers delegated to us by the Canterbury Regional Council:

16.2 For all of the above reasons and pursuant to sections 104 and 104B of the Resource Management Act 1991, we **GRANT** application CRC040836 by Southdown Holdings Limited for the following activity:

- (a) Construct, maintain and operative an irrigation pump station and intake on the bed of Lake Ohau (at our about map reference NZMS 260 H38:621-552); and
- (b) Construct and maintain a pipeline underneath Maori Creek (at or about map reference NZMS 260 H38:617-512)
- (c) A temporary diversion of Maori Creek during the construction and laying of a pipeline beneath Maori Creek at or about reference NZMS 260 H38:617-512.

16.3 Pursuant to section 108 RMA, the grant of consent is subject to the conditions specified at **Appendix A**, which conditions form part of this decision and consent

16.4 The duration of this consent shall be until the 30<sup>th</sup> April 2025.

DECISION DATED AT CHRISTCHURCH THIS 22ND DAY OF NOVEMBER 2011

Signed by:

Paul Rogers



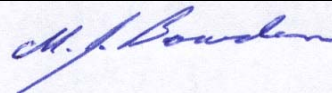
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Dr James Cooke



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Michael Bowden



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Edward Ellison



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## APPENDIX A

### Conditions of Consent (CRC040836)

1. The works shall be limited to:
  - a. The construction, maintenance and use of an irrigation pump station and intake on the shoreline and lake bed of Lake Ohau at or about NZMS 260 H38:621-522; and
  - b. The construction, maintenance, and use of a pipeline underneath Maori Creek at or about NZMS 260 H38:617-512, as shown on attached plan.

Note: For the purposes of this consent "maintenance" as described in condition 1 of this consent includes, but is not limited to, repairs to the gallery, pipeline and pumping stations.

2. Excavation shall not exceed a depth of 3.3 metres below the level of the natural lake or river bed prior to excavation.
3. If further works at the site in the active lake or river bed is not to occur within seven days following the last working at the site, then the following shall occur:
  - a. All deposits of gravel, sand and other natural material shall be levelled to the natural bed level;
  - b. The excavation area shall be reshaped and formed to a state consistent with the surrounding natural river or lake bed.
4.
  - a. The Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, shall be notified not less than 3 working days prior to the commencement of works described in condition (1)"
  - b. Prior to commencing excavation, a copy of this resource consent shall be given to all persons undertaking activities authorised by this consent.
5. Prior to giving effect to this consent, the consent holder shall obtain any necessary easements from Land Information New Zealand associated with the occupation of Lake Ohau.
6. Works to construct and maintain the intake structure shall not be carried out on public holidays, nor public holiday weekends.
7. Works to construct and maintain the intake structure shall only occur during the hours of 7am to 7pm, Monday – Sunday.
8. The consent holder shall ensure that the following procedure is adopted in the event that koiwi (human remains) or taonga (cultural artefacts) are unearthed or are reasonably suspected to have been unearthed during the course of construction and other activities.
  - a. Immediately as it becomes apparent, or is suspected by workers at the site that koiwi or taonga have been uncovered, all activity at the site will cease.
  - b. The plant operator will shut down all machinery or activity immediately, and leave the area and advise his or her supervisor of the occurrence.

- c. The supervisor shall take steps to immediately to secure the area in a way that ensures that koiwi or taonga remain untouched as far as possible in the circumstances and shall notify the consent holder.
  - d. The consent holder will notify the New Zealand Police (in the case of koiwi) and the relevant runanga representatives that it is suspected that koiwi and/or taonga have been uncovered at the site.
  - e. The runanga representatives will contact the appropriate kaumatua to act on their behalf in this matter in order to guide and advise the consent holder as to the appropriate course of action.
  - f. The consent holder shall ensure that representatives on its behalf are available to meet and guide kaumatua and police (as appropriate) to the site, assisting with any requests they may make.
  - g. If the kaumatua are satisfied that the koiwi or taonga are of Maori origin the kaumatua will decide how they are to be dealt with and will communicate its decision to the consent holder, New Zealand Police and such other parties as are considered appropriate.
  - h. Activity on site shall remain halted until the Police and the kaumatua have given approval for operations to recommence.
  - i. The consent holder shall ensure that kaumatua are given the opportunity to undertake karakia and such other religious or cultural ceremonies and activities at the site as may be considered appropriate in accordance with tikanga Maori (Maori custom and protocol).
9. Erosion controls shall be installed on all earthworks to prevent sediment from flowing into any surface water body.
10. Works shall not be undertaken in any manner likely to cause erosion of or instability to, the banks or bed of Lake Ohau or Maori Creek; or reduce the flood-carrying capacity of the waterway.
11. The consent holder shall adopt the best practicable options to:
- a. Minimise soil disturbance and prevent soil erosion;
  - b. Prevent sediment from flowing into any surface water; and
  - c. Avoid placing cut or cleared vegetation, debris, or excavated material in a position such that it may enter surface water.
12. At least 20 working days prior to the commencement of the works, the consent holder shall submit to the Canterbury Regional Council, Attention: RMA Enforcement and Compliance Manager an Erosion and Sediment Control Plan (ESCP) that includes, but is not limited to the following:
- a. a locality map; and
  - b. detailed drawings showing the type and location of erosion and sediment control measures, on-site catchment boundaries, and off-site sources of run-off; and
  - c. drawings and specifications of all designated erosion and sediment control measures with supporting calculations; and
  - d. a programme of works, which includes but is not limited to a proposed timeframe for the works;



- e. a schedule of inspections and maintenance of erosion and sediment control measures; and
  - f. details of when the erosion and sediment control measures are to be established and decommissioned; and
  - g. measures to ensure that there is no tracking of mud or earth onto the surrounding road network, including the provision of shaker ramps and/or wheel washes where appropriate; and
  - h. measures to be undertaken should erosion and sediment control measures fail and result in contamination of any watercourse or water body.
13. The ESCP shall be prepared in general accordance with the Environment Canterbury Erosion and Sediment Control Guidelines 2007 (ECAN ESC Guidelines).
14. The ESCP shall be communicated to all persons undertaking activities authorised by this consent and a copy of the ESCP shall be kept on site at all times.
15. The Erosion and Sediment Control Plan and any revisions of that document shall be submitted to the Canterbury Regional Council Attention: RMA Compliance and Enforcement Manager for certification that the Erosion and Sediment Control Plan meets all the requirements of the conditions of this consent.
16. No activities authorised by this consent shall commence or be undertaken other than in full compliance with an Erosion and Sediment Control Plan that has been certified by or on behalf of the Canterbury Regional Council RMA Compliance and Enforcement Manager in terms of condition 12.
17. Prior to any construction or maintenance works being carried out in the period 1 September to 1 February, the consent holder shall ensure that:
- a. a suitably qualified and independent person inspects the proposed area of works, no earlier than eight working days prior to any works being carried out, and locates any bird breeding sites of birds listed in Appendix A;
  - b. the person carrying out the inspection prepares a written report that identifies all the located bird breeding or nesting sites and provides copies of that report to the consent holder and the Canterbury Regional Council;
  - c. the name and qualifications of the person carrying out the inspection are provided to the Canterbury Regional Council with the report;
  - d. any person carrying out works authorised by this consent are informed of any bird breeding or nesting sites located; and
  - e. where work ceases for more than 10 days, the site will be re-inspected for bird breeding and nesting sites in accordance with parts (a) to (d) of this condition.
18. The consent holder shall ensure that no construction or maintenance work is undertaken within 100m of any bird breeding or nesting sites as identified in accordance with condition 19.
19. Construction and maintenance works shall avoid the period of 1 August to 31 October inclusive, in any year.
20. To prevent the spread of Didymo or any other aquatic pest, the consent holder shall ensure that activities authorised by this consent are undertaken in accordance with the Biosecurity New Zealand's hygiene procedures.

Note: You can access the most current version of these procedures from the Biosecurity New Zealand website <http://www.biosecurity.govt.nz> or Environment Canterbury Customer Services.

21. The consent holder shall ensure that during construction:
  - a. All practicable measures shall be undertaken to prevent oil and fuel leaks from vehicles and machinery.
  - b. There shall be no storage of fuel or refuelling of vehicles and machinery within 20 metres of the bed of a river.
  - c. Fuel shall be stored securely or removed from site overnight.
22. The consent holder shall ensure that works do not prevent the passage of fish, or cause the stranding of fish in pools or channels.
23. The consent holder shall ensure that machinery shall be free of plants and plant seeds prior to use in the waterbody.
24. The consent holder shall ensure that the use of the pump station associated with this consent does not exceed an operational noise level of 40dBA measured in accordance with the relevant District Plan.
25. All disturbed areas outside the lake or river bed shall be stabilised and revegetated with similar species to those found in the intermediate vicinity of the particular site following completion of the works
26. All spoil and other waste material from the works shall be removed from site on completion of works.
27.
  - a. The consent holder shall ensure that if water is abstracted the gallery and, or, intake shall be designed to prevent native and exotic fish species from entering the system.
  - b. The fish screen shall be designed by a person with experience in freshwater ecology and fish screening techniques, and constructed in a manner that ensures the principals of the NIWA fish screening guidelines (Fish Screening: Good Practice Guidelines for Canterbury, NIWA Client Report 2007-092, October 2007, or other revision of these guidelines. (Copy available on [www.ecan.govt.nz](http://www.ecan.govt.nz))) are achieved.
  - c. No water may be taken in terms of this permit until, upon completion of the intake structure a report is provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager. The report shall be prepared by the consent holder for certification and shall demonstrate compliance with the following:
    - i. Design plan for the gallery specifying gallery dimensions;
    - ii. Detail of depths and sizes of layers of gravel over the gallery;
    - iii. Photographic evidence of key stages of construction of the gallery, including demonstrating compliance with gravel specifications in sub clause (c)(ii) above;
    - iv. Any ongoing maintenance required by the manufacturer is carried out in accordance with their specifications."

- d. The intake structure shall be maintained in good working order. Records shall be kept of all inspections and maintenance. And those records shall be provided to the Canterbury Regional Council upon request.
28. Water shall only be temporarily diverted within the bed of Maori Creek for the purpose of installation and maintenance of a pipeline, installed and maintained in accordance with this consent (CRC040836).
29. The diversion of water referred to in Condition 28 shall only occur over a maximum reach of 50 metres at map reference NZMS 260 H38:617-512.
30. The diversion of water shall not impede fish passage or cause the stranding of fish in pools or channels.
31. For the period of diversion, all water diverted shall remain within the bed.
32. When diversion ceases, water shall be returned to its original course
33. The Canterbury Regional Council may once per year, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent pursuant to Section 128 of the RMA, for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage.
34. Lapsing date for the purposes of section 125 of the Resource Management Act 1991 shall be 31 December 2016.

**Advice note:**

Nothing in this consent authorised the taking and use of water for irrigation purposes. A separate consent is required from the Canterbury Regional Council for this activity.

Plan CRC040836



Schedule A – list of bird species

South Island Pied Oystercatcher

Black Stilt

Pied Stilt

Wrybill

Banded Dotterel

Black-fronted Dotterel

Grey warbler

Fantail

Bellbird

Silvereye

Spur-winged Plover

Paradise Shelduck

Grey Duck

NZ Shoveler

Grey Teal

NZ Scaup

Black-billed Gull

Red-billed Gull

Caspian Tern

White-fronted Tern

Black-fronted Tern

White-winged Black Tern

Australasian Bittern

Marsh Crake

Spotless Crake

Cormorant/shag colonies

Or any other bird species deemed by a suitably qualified person to require protection.