

PHOTO 1 : 50mm COMPOSITE IMAGE TAKEN 14 DECEMBER 2021 : ARROWTOWN LAKE HAYES ROAD : MCENTYRES HILL



PHOTO 2 : 50mm COMPOSITE IMAGE TAKEN 14 DECEMBER 2021 : ARROWTOWN LAKE HAYES ROAD : AYR AVENUE





PHOTO 3 : 50mm COMPOSITE IMAGE TAKEN 14 DECEMBER 2021 : NORTHERN END LAKE HAYES WALKING TRACK

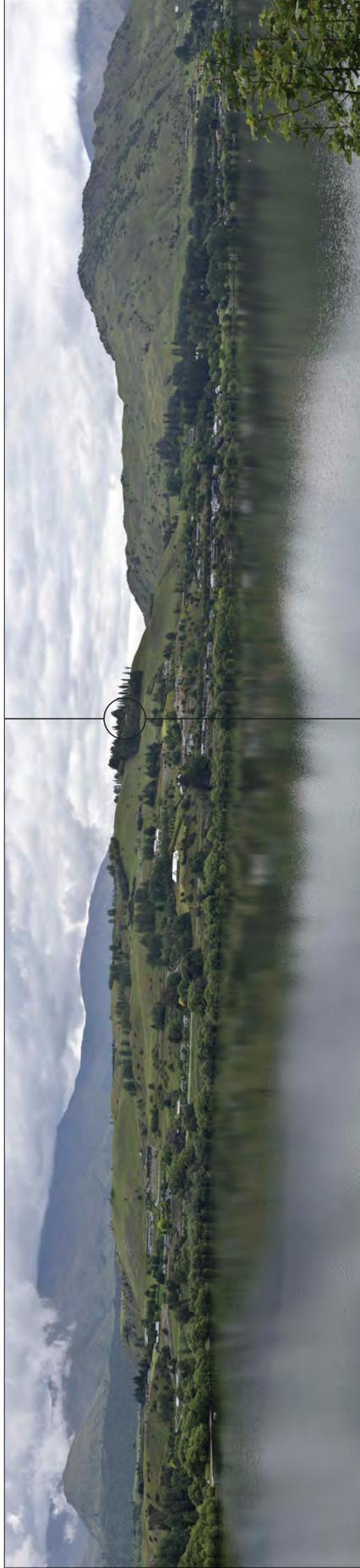


PHOTO 4 : 50mm COMPOSITE IMAGE TAKEN 14 DECEMBER 2021 : WESTERN HIGH POINT LAKE HAYES TRACK





PHOTO 5 : 50mm COMPOSITE IMAGE TAKEN 14 DECEMBER 2021 : LAKE HAYES SHOWGROUND PAVILLION

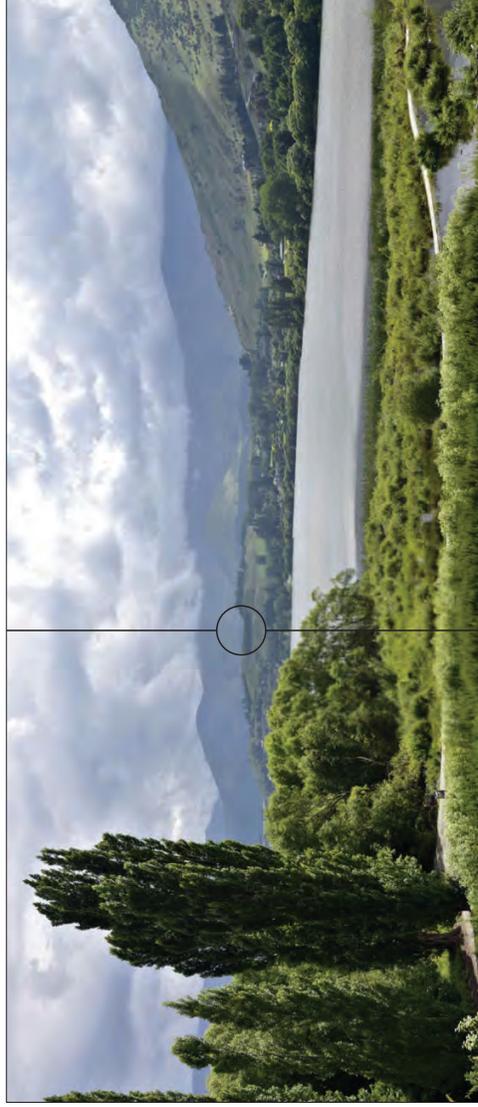


PHOTO 6 : 50mm COMPOSITE IMAGE TAKEN 14 DECEMBER 2021 : SH6 VIEW LAKE HAYES SOUTHERN END

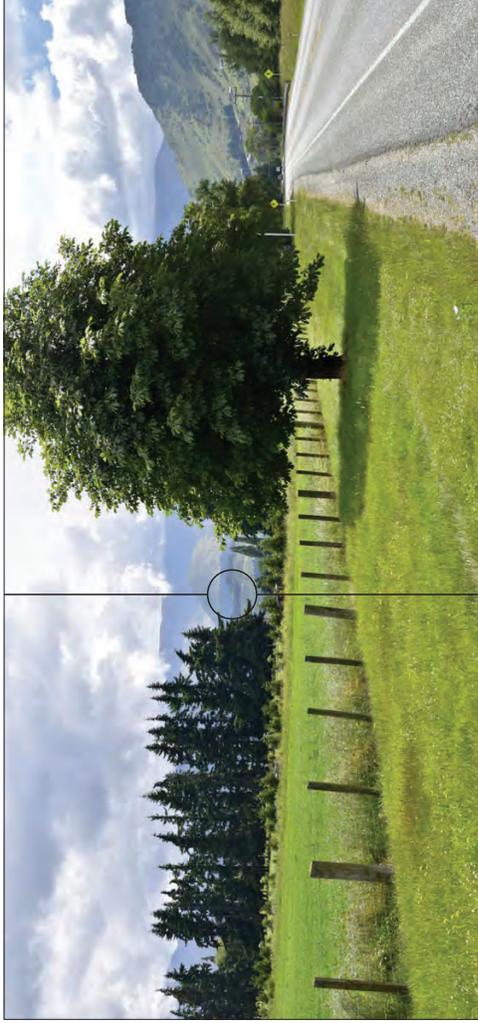


PHOTO 7 : 50mm COMPOSITE IMAGE TAKEN 14 DECEMBER 2021 : SH6 FRANKTON LADIES MILE HIGHWAY

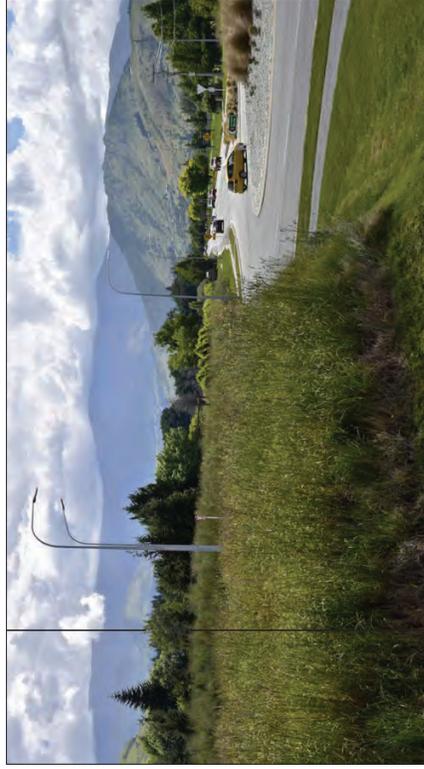
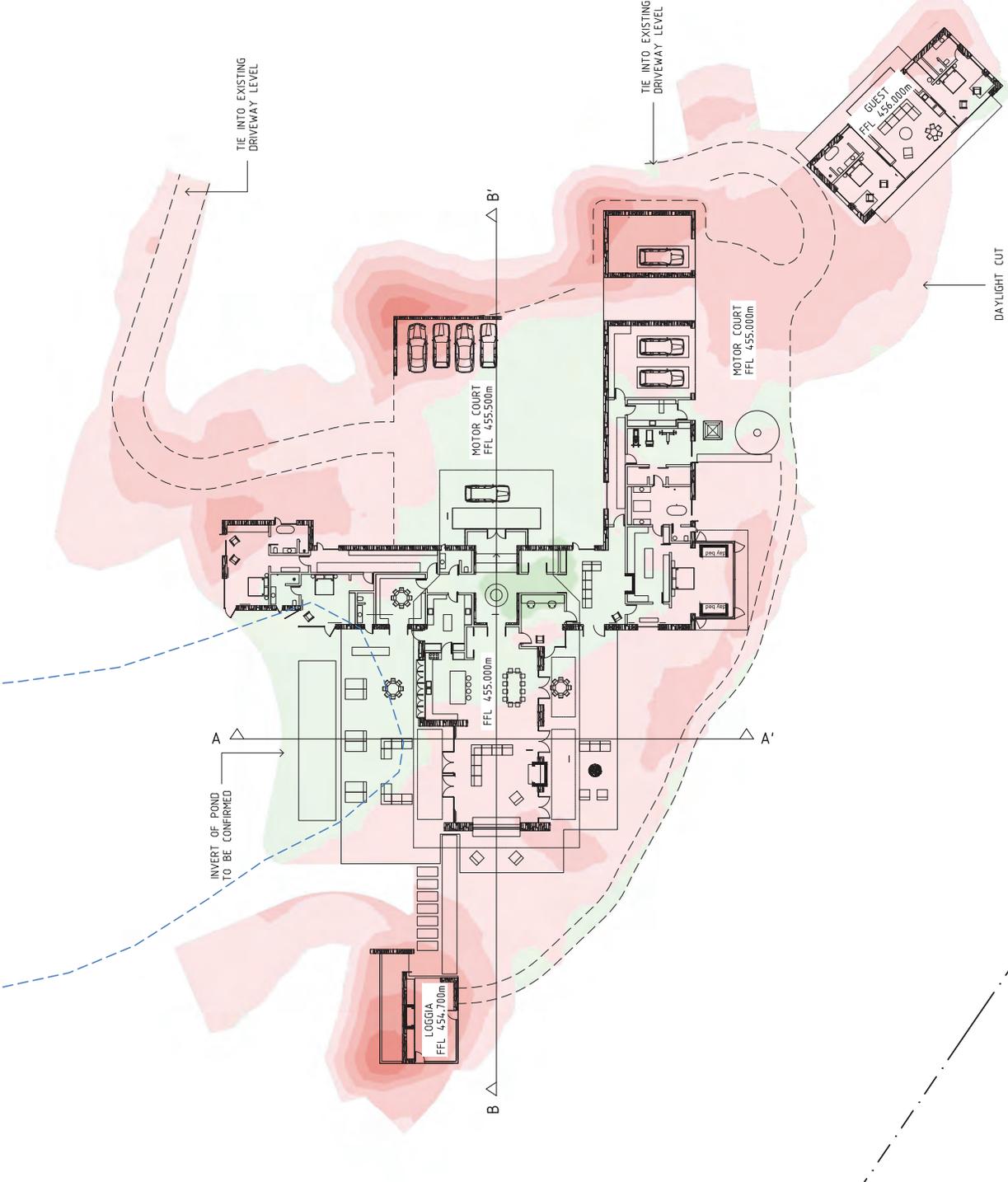


PHOTO 8 : 50mm COMPOSITE IMAGE TAKEN 14 DECEMBER 2021 : STALKER ROAD ROUNDABOUT AT HIGH LEVEL



<p>ISSUED: 17/01/2022</p> <p>Clark Fortune McDonald & Associates Licensed Chartered Surveyors - Land Development - Planning Consultants 308 LOWER SHOOTOVER ROAD 3 LOWE STREET, ADDINGTON WILSONS CREEK HAMERSEY STREET EMAIL: admin@cfma.co.nz</p>		<p>Revision Details</p> <table border="1"> <thead> <tr> <th>Rev.</th> <th>Date</th> <th>By</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		Rev.	Date	By			
Rev.	Date	By							
<p>Client</p> <p>DAVIES</p> <p>ALL DIMENSIONS SHOWN ARE IN METERS UNLESS SHOWN OTHERWISE ANY PERSON USING CLARK FORTUNE MCDONALD DRAWINGS SHALL BE DEEMED TO HAVE ACCEPTED THE DIMENSIONS AND TO HAVE RELEASED AND AGREED TO HOLD CLARK FORTUNE MCDONALD ASSOCIATES AND ITS OFFICERS AND EMPLOYEES HARMLESS FROM AND AGAINST ALL CLAIMS AND DAMAGES OF ANY KIND WHICH MAY BE ASSERTED AGAINST THEM OR THEIR EMPLOYERS OR AGENTS IN CONNECTION WITH THE DRAWINGS AND OTHER DATA ELECTRONIC OR MECHANICAL REPRODUCTION OR TRANSMISSION OF ANY KIND WITHOUT THE WRITTEN PERMISSION OF CLARK FORTUNE MCDONALD ASSOCIATES. COPYRIGHT ON THIS DRAWING IS RESERVED.</p>		<p>Project</p> <p>13236</p> <p>11</p> <p>SHEET 001</p> <p>1:400 @ A1</p> <p>1:800 @ A3</p> <p>JAN 2022</p> <p>JJ</p> <p>CHECKED</p> <p>APPROVED</p> <p>MT NIC 2000 / MSL</p>							
<p>LAKE HAYES - DAVIES - EARTHWORKS DESIGN 903 LAKE HAYES - ARROW JUNCTION EARTHWORKS DEPTHS</p>									



LEGEND

[Green Box]	FILL 1.0-2.0m
[Light Green Box]	FILL 0.0-1.0m
[Yellow Box]	CUT 0.0-1.0m
[Light Orange Box]	CUT 1.0-2.0m
[Orange Box]	CUT 2.0-3.0m
[Dark Orange Box]	CUT 3.0-4.0m
[Red Box]	CUT 4.0-5.0m
[Dark Red Box]	CUT 3760m ³
[Red Box]	FILL 400m ³
[Dark Red Box]	AREA 5000m ²

NOTES:
 EXCAVATION LEVELS ARE 0.2m BELOW FFL
 NORTH EAST KNOLL VOLUME INCLUDED IN TOTAL
 INVERT OF POND LEVELS TO BE CONFIRMED. ADDITIONAL FILL MAY BE REQUIRED.
 BACKFILL NOT ALLOWED FOR:

ISSUED 17/01/2022

LAKE HAYES - DAVIES - EARTHWORKS DESIGN
903 LAKE HAYES - ARROW JUNCTION
EARTHWORKS DEPTHS

Clark Fortune McDonald & Associates
 Licensed Civil and Surveying Engineers - Planning Consultants
 308 LOWER SHOOTOVER ROAD
 QUEENSTOWN
 3 LOWE STREET, ADDINGTON
 CHRISTCHURCH
 14 MARNEY STREET
 COKE
 EMAIL: cfm@cfma.co.nz

Revision Details

Rev.	Date	By

Client: DAVIES

Drawings: 13236
Sheet: 11
Scale: 1:200 @ A1
 1:400 @ A3
Date: JAN 2022
Drawn: JJ
Checked: []
Approved: []

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SERVICES ASSESSMENT REPORT

**MJ & BP DAVIES FAMILY TRUST
PROPOSED DWELLING
903 LAKE HAYES-ARROW JUNCTION HIGHWAY, QUEENSTOWN
December 2021**



CLARK FORTUNE MCDONALD & ASSOCIATES
REGISTERED LAND SURVEYORS, LAND DEVELOPMENT & PLANNING CONSULTANTS

Revision No	Date	Description	Prepared by	Checked by	Approved by
	17.12.2021	Issued for Resource Consent	Chris Hansen	Hayden Knight	Chris Hansen

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1 INTRODUCTION

Clark Fortune McDonald & Associates (CFM) has been engaged by MJ & BP Davies Family Trust to assess servicing options for a proposed residential dwelling and guest house at 903 Lake Hayes-Arrow Junction Highway.

The proposal seeks to replace an existing residential dwelling with a new dwelling and guest house.

The site is legally described as Lot 1 DP 443715 held in Record of Title 585478.

The site is accessed from Lake Hayes-Arrow Junction Highway, State Highway 6 Lake Hayes Queenstown.

This report is preliminary for the purposes of resource consent only. Further information and detailed engineering design will be required if development proceeds.

2 SCOPE OF WORK

The scope of work includes examination of existing engineering reports for the subject property and as-built records, confirmation of capacity of existing services to determine the adequacy of the existing infrastructure, and recommendation of infrastructure servicing options.

3 DESIGN STANDARDS & REPORTS

Site development standards include, but are not limited to, the following:

- QLDC Land Development and Subdivision Code of Practice adopted 8/10/2020.
- NZS4404:2010
- Drinking-Water Standards for New Zealand 2005.
- NZS PAS 4509:2008, New Zealand Fire Service Fire-fighting Water Supplies Code of Practice.
- Water for Otago, Otago Regional Council regional water plan.
- Document for New Zealand Building Code Surface Water - Clause E1 / Verification Method 1.
- On-site domestic wastewater management AS/NZS 1547:2012

4 ACCESS

There is an existing formed and sealed access from the State Highway to the existing house site.

The intersection with the State Highway is shared with the Bendemeer Development.

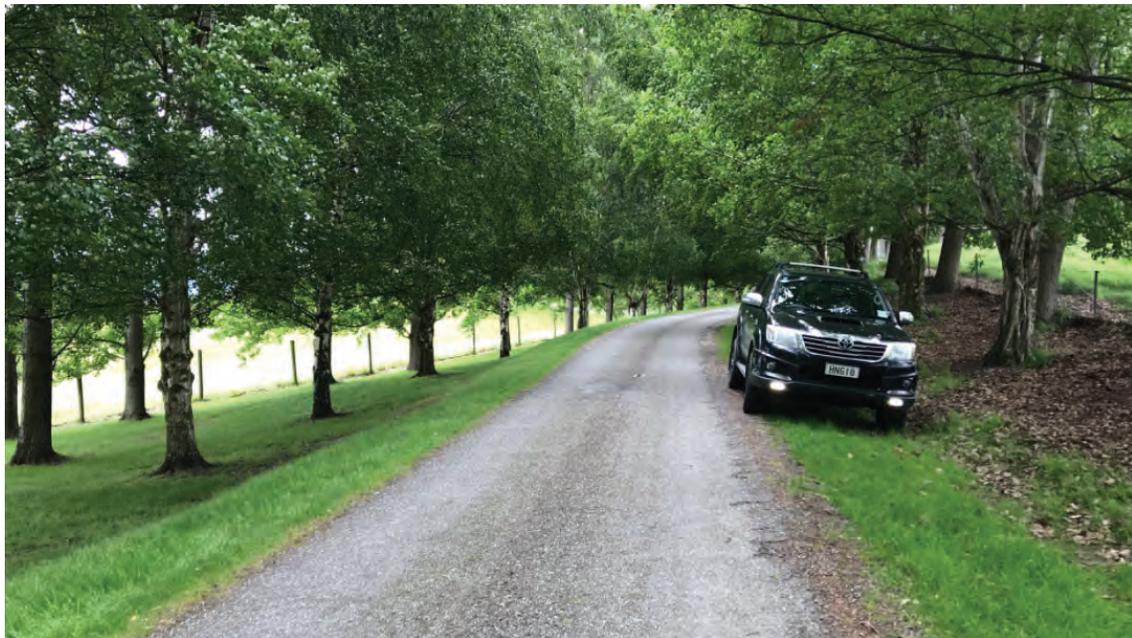
As this application is replacing an existing dwelling with a new dwelling the number of vehicle movements is not expected to change. Therefore, it is not anticipated there will be any noticeable increase in traffic on the state highway intersection.

Once through the Bendemeer entry, a tree lined private accessway winds its way up to the house site over an approximate length of 750m. The access is shared by 4 dwellings in total, the first driveway exiting approx. 350m from the entrance at the first switch back. At the crossing for the first driveway, there is localized widening on the road and the driveway has good sight distances up and down the access way. The driveways for the 2nd and 3rd properties are a further 350m along the access. These driveways come off perpendicular to the access where it is relatively flat and straight offering safe sight distances.

The access has a nominal seal width of 3.0m, and has additional grassed shoulders on one or both sides in places to enable passing and pedestrians. Localized widening is provided on the switchbacks and at the existing crossings. The max. gradient of the access way is approx. 1 in 10 (10%)

The access formation is therefore to be considered compliant with Figure E1 of the QLDC CoP.

Below is a photo of the existing access to illustrate the standard of the existing formation.



It is noted that there are signs of edge break of the seal occurring which is due largely because of construction traffic. It is recommended that upon completion of construction of the proposed dwelling, the users of the access might consider a re-seal to prolong the life of the pavement.

5 WASTEWATER

A property search reveals that the subject site is rated for two connections to QLDC Lake Hayes wastewater service. A copy of the rating notice is attached confirming this. The connections cater for the existing dwelling and the residential flat on the property.

5.1 Existing services

The existing dwelling was established on site in the early 1980's. At that time, no Council reticulation was available and the dwelling was serviced by onsite wastewater disposal via traditional septic tank. Council records for this original system have not been located.



Aerial photograph from 1983.

Since then, numerous subdivisions of the property have been undertaken and infrastructure installed to service new sites all of which are connected to QLDC network. The subject site has been the balance title for the numerous subdivisions.

It is not immediately apparent from searching QLDC GIS as-built records how the subject property is connected to the Lake Hayes Scheme.

A review of the easements on the title however reveal an existing right to convey wastewater over the adjoining property Lot 39 DP359527 at 3 Bendemeer Lane.

6 lots were created by the former owner of the subject site in conjunction with the Bendemeer subdivision. A connection to Bendemeer reticulation was installed and easements created at that time. A copy of the relevant title, subdivision plan, and easement document are attached.

The connection point is shown circled in the GIS screen shot below.



QLDC GIS screenshot

The residential flat on site was established in 2005/6. Again, property files for this building were not able to be located. This building was established shortly after the Bendemeer subdivision was completed and it is concluded that it has been connected to the network at the connection point mentioned above. This explains the rate notice showing two connections to the scheme.

5.2 Proposed residential demand

The proposed dwelling is three bedrooms plus ensuites and the guest house is 2 bedrooms with ensuites. The house contains a kitchen and laundry, the guest house has a kitchenette. The house is designed to serve as a family home. It is therefore expected that the demands generated will be no different to the existing residential dwelling.

Under QLDC COP residential demand would be 250 litres per person per day based on 3 people per dwelling. With guests, 6 occupants might be anticipated in peak times.

5.3 On Site Wastewater Disposal System

Given the age of the existing system and lack of available information, it is proposed that the old septic system would be located and de-commissioned. A new on-site system using the latest of technology would be feasible to service the new demand. A tertiary system such as an Austin Bluewater ABS2000 coupled with a Microlene UV water disinfection unit would provide for a very high level of treated waste water. However, given the property is located within the Lake Hayes watershed, on site waste water disposal is not favoured, instead utilising the connection to the QLDC wastewater network is preferred.

5.4 Reticulated connection

The preferred option for servicing the proposed dwelling, guest house and existing residential flat is by Low Pressure Sewer. An Ecoflow E/one packaged grinder semi positive displacement dual pump within a model 2014iP simplex tank or equivalent could be installed to meet the demand for all the residential activity on the property. It would then pump via 32mmØ rising main to the connection point described above.

One further advantage of this system is that it contains an integrated 1,337 litre storage tank which can attenuate flows and discharge timing can be set to pump at off peak times.

6 STORMWATER

6.1 Existing Stormwater Infrastructure

There is currently no reticulated stormwater infrastructure servicing the site. The subject site contains existing buildings, driveways and other impervious areas. Stormwater run-off from the existing development is disposed on site. There are some driveway sumps by the existing dwelling that capture stormwater and dispose it to ground. It is anticipated that this is disposed by way of traditional soak pit.

6.2 Stormwater Catchment.

The proposed dwelling and guest house sit in the top of a basin shaped catchment that drains towards Lake Hayes. An existing pond of approx. 2,200m² lies in the head of the basin.

The extent of the impervious area for the dwelling, guest house, motor courts, decks and terraces is approx. 2,500m². This is an approx. doubling of area of impervious surfaces from the existing dwelling.

Existing overland flow paths exit down slope to the west over pasture until it meets the Hawthorn private access road. This roadway acts as a secondary overland flow path until it reaches Arrowtown-Lake Hayes Road.

6.3 Design criteria

For the proposed dwelling, stormwater design would be completed in accordance with NZ Building Code E1 – Surface water.

Stormwater run-off from new impervious areas would be disposed to ground. The design shall be undertaken in accordance with Verified Method E1/VM1. This would take the form of a soak-pit or similar on-site storage/soakage system.

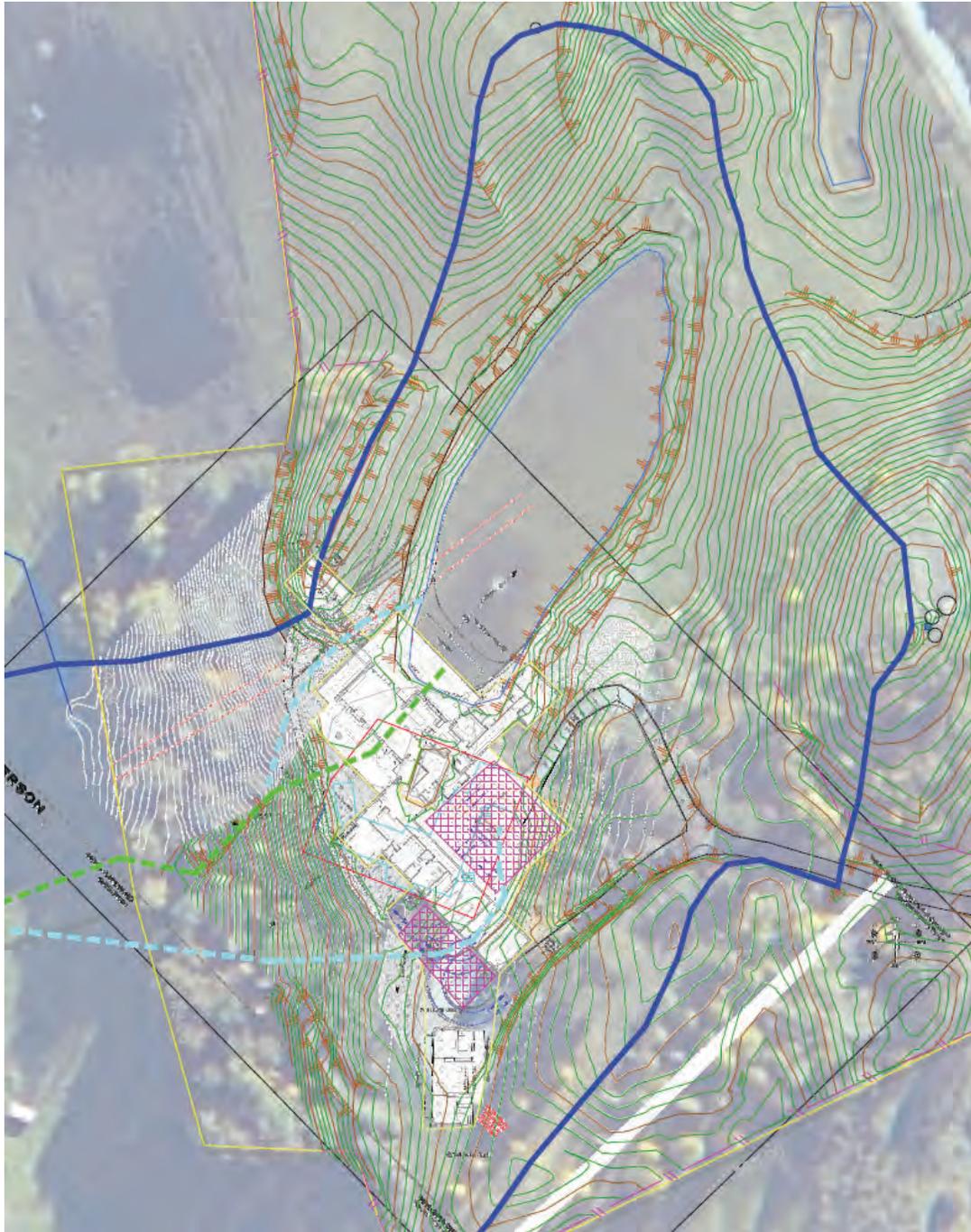
The applicant is also considering the re-use of stormwater run-off for use for irrigation as part of the design.

A location for stormwater attenuation/soakage/disposal would be beneath the motor court. This is the same location as the existing driveway drainage. A stormwater gallery of adequate size could be constructed beneath the motor court. Secondary overflow for the gallery would be through the entry which has 0.5m fall to the driveway outside.

From this location overflow would be back to the natural discharge point from the catchment.

It is noted that the existing natural overflow path from the pond will need re-routed slightly between the terrace and the dining loggia.

A stormwater concept sketch is shown below. The bold blue line is the catchment boundary, green dashed line is existing overland flow path. Light blue dashed lines would be new overland flows post construction and the pink hatching locations for stormwater attenuation/disposal. The gallery areas measure approx. 500m². The sizing of the gallery should ensure that discharge rates post development do not exceed the pre-development scenario.



Stormwater concept

Detailed design is required to be supplied with the building consent documentation and shall be completed by a suitably qualified person.

7 WATER SUPPLY

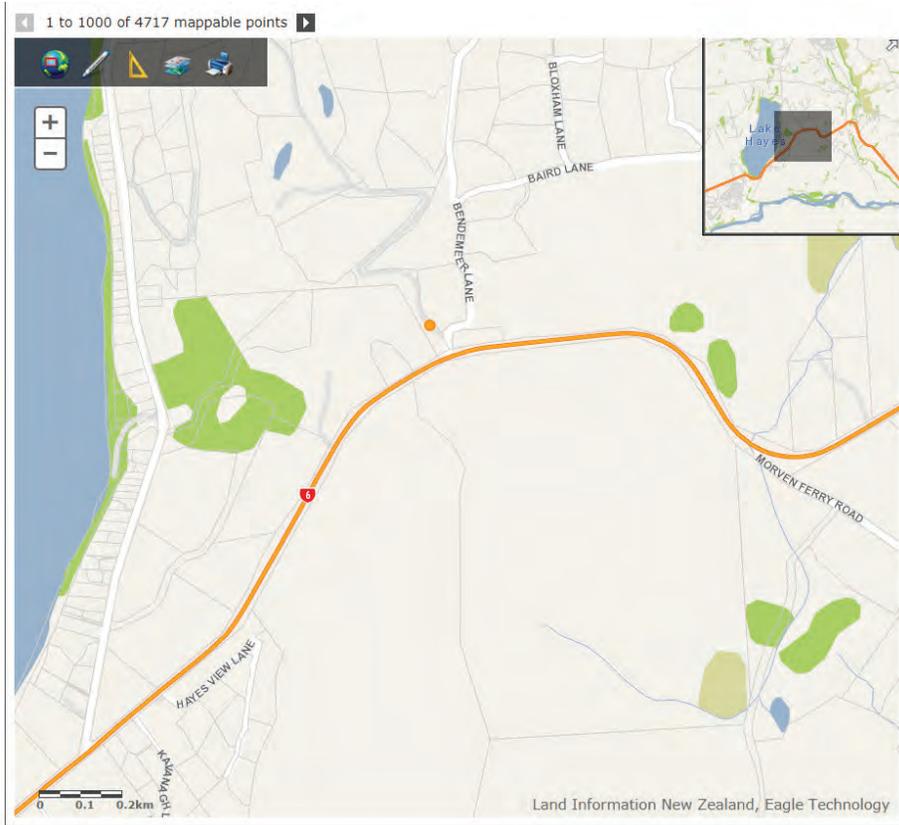
7.1 Existing Infrastructure

It is noted that the rates assessment indicates 2 connections to the QLDC Lake Hayes water supply scheme. The property however appears to sit outside of the Lake Hayes water scheme boundaries. The QLDC GIS does not clearly show any specific connection points, however there are two existing locations adjoining the property boundary where QLDC reticulated water could be accessed.



GIS screenshot

An existing bore is situated on the property owned by the applicant. It is just on the northern side of the highway near the highway intersection. The bore is shown as the orange dot on the ORC GIS screen shot below.



ORC GIS Screenshot

The bore/pump shed and tank arrangement are also shown below.



Water source

The bore water is then pumped to header tanks on the most elevated part of the property. There are three tanks which sit atop a small knoll, 2 x 10,000l tanks and one 22,500l (5,000 gallons). Therefore the three tanks have a total volume of 42,500l.



Bore and header/storage tanks.

The storage tanks are located at approx. elevation 470m and the proposed floor level of the new dwelling is 455.0m. Therefore, the head from the existing tanks will not provide sufficient domestic pressure for the proposed dwelling. A booster pump within the new dwelling will be needed to provide sufficient pressure to the house. This pump should be sized as part of the house design.

It is noted that the property is located outside the QLDC reticulated water scheme boundary.

The property is also serviced by the Arrow Irrigation Scheme. The property has a 1ha quota of water from the scheme which is used for amenity planting irrigation and to keep the pond topped up over the drier months.

7.2 Water supply design

The property has an existing water supply system that supplies the existing dwelling and flat on site. It is proposed that the same system will be suitable for providing service to the new dwelling. It is not expected that the occupancy of the new house will increase over that of the current occupancy.

The water supply has been tested and results show the water is potable.

The proposed residential dwelling is expected to have the following domestic water demands.

Residential water demand has been determined from QLDC COP:

6.3.5.6 (a) Minimum Water Demand

daily consumption: 700 l / person / day; occupancy = 3

peak factor: 4.0

Number of residential units: 1

average daily consumption; 2,100 l / day;

peak hour flow; 0.1 l / second.

7.3 Required Firefighting demand

Firefighting for the proposed dwelling will need to meet the requirements of SNZ PAS 4509 – 2008 NZ Fire Service Firefighting Water Supplies Code of Practice.

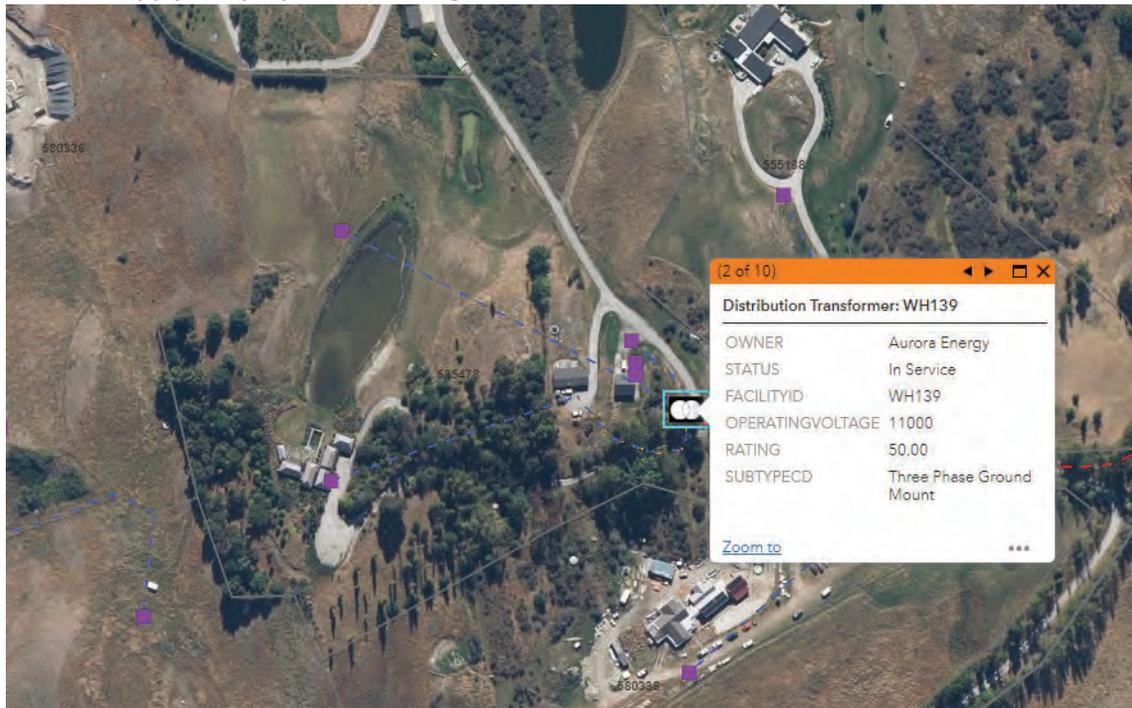
In this instance the preferred solution would be to cater for the firefighting in the existing storage tank(s) on site. The tanks will need to be arranged as per appendix B of the standard. Minimum static reserve to be kept at all times to be 45,000l. This can be held in the same tanks as the domestic storage or kept in separate tanks as required.

The existing tanks on site would therefore need to be augmented by a further 15,000l tank to then be used to meet the domestic and firefighting storage demands. It would require a supply main of 100mm dia to be run to the new dwelling to within 90m of the fire risk with an approved firefighting coupling. This would need to be located at a suitable hardstanding area for fire appliance access no closer than 6m to the fire hazard.

One further option would be to install sprinklers in the proposed dwelling.

8 POWER, TELECOMMUNICATIONS

There is existing electricity network supplying the existing buildings on the property. An existing three phase 50KvA ground mount transformer is located on site. It is anticipated that this can supply the proposed dwelling.



Aurora GIS

Telecommunications services exist and service the existing dwelling on site. This network would be suitable for the replacement dwelling and guest house.

Any new infrastructure shall be installed underground. All necessary services will be extended to service the proposed dwelling.

It is not anticipated that there will be any supply or capacity issues for these services and connection will be made available from existing infrastructure.

Rating Information Details

Property Details

Valuation Number:	<u>2907127228</u>
Location:	903 LAKE HAYES-ARROW JUNCTION HIGHWAY RD 1 QUEENSTOWN 9371
Legal Description:	LOT 4 DP 453236 & LOT 1 DP 443715
Certificate Of Title	585478
Nature Of Improvements:	2 DWG FG OBS OI

Owner with Address

Owners	Postal Address
BRIDGET PATRICIA DAVIES	Invalid Address
MICHAEL JOHN DAVIES	156 HOGANS GULLY ROAD RD 1 QUEENSTOWN 9371
TONY JASON SYCAMORE	Invalid Address

Valuation

Value Type	Value
Land Value*	<u>2210000</u>
Capital Value*	<u>3410000</u>
Improvement Val	<u>1200000</u>
QV Land Area	8.9732

Your results have been limited.

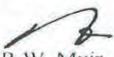
This Years Rates

Reference	Description(basis)	Factor	Rate	Amount
<u>4418454</u>	Recreation & Events Chge Rural	2	111.00	\$222.00
<u>4418449</u>	General Rate Country Dwg	<u>3410000</u>	<u>0.00003600</u>	\$122.76
<u>4418455</u>	Roading Country Dwell Wakatipu	<u>3410000</u>	<u>0.00022700</u>	\$774.07
<u>4418446</u>	Aquatic Centre Charge Wakatipu	2	115.00	\$230.00
<u>4418447</u>	Governance & Regulatory Charge	2	100.00	\$200.00
<u>4418452</u>	Governance Country Dwelling	<u>3410000</u>	<u>0.00015600</u>	\$531.96
<u>4418453</u>	Recreation Country Dwelling	<u>3410000</u>	<u>0.00014280</u>	\$486.95
<u>4418450</u>	Regulatory Country Dwelling	<u>3410000</u>	<u>0.00022500</u>	\$767.25
<u>4418448</u>	Sewerage Lake Hayes	2	560.00	\$1,120.00
<u>4418456</u>	Sports Halls & Libraries	2	410.00	\$820.00
<u>4418457</u>	Water Lake Hayes Annual Chg	2	512.00	\$1,024.00
<u>4418458</u>	Waste Management Charge	2	326.00	\$652.00
<u>4418451</u>	Uniform Annual General Charge	2	77.00	\$154.00
Total Rates				\$7,104.99



**RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD
Search Copy**




R. W. Muir
Registrar-General
of Land

Identifier 585478
Land Registration District Otago
Date Issued 04 December 2012

Prior References
552926 555186

Estate Fee Simple
Area 8.9732 hectares more or less
Legal Description Lot 1 Deposited Plan 443715 and Lot 4
Deposited Plan 453236

Registered Owners

Michael John Davies, Bridget Patricia Davies and Tony Jason Sycamore

Interests

Subject to Section 168A Coal Mines Act 1925 (affects part Lot 4 DP 453236 formerly part Lot 1 DP 18242)

Subject to a right to convey water over part Lot 1 DP 443715 marked JJ and a right to store water over part Lot 1 DP 443715 marked ZB both on DP 443715 created by Transfer 877687.6 - Produced 10.3.1995 and entered 8.5.1995 at 9:17 am

Appurtenant hereto is a right to convey electricity specified in Easement Certificate 983851.6 - 24.2.2000 at 9:07 am

Appurtenant hereto is a right to convey electricity created by Transfer 983851.7 - 24.2.2000 at 9:07 am

5002654.1 Gazette Notice declaring adjoining road (S.H.No 6) fronting part within land to be limited access road - 26.5.2000 at 2:26 pm

5018071.2 Notice pursuant to Section 91 Transit New Zealand Act 1989 - 8.1.2001 at 12:51 pm

Land Covenant in Transfer 5069118.11 - 8.8.2001 at 9:05 am

Subject to a right to convey water over part Lot 1 DP 443715 marked ZA, AB and ZC on DP 443715 created by Transfer 5069118.12 - 8.8.2001 at 9:05 am

Some of the easements created by Transfer 5069118.12 are subject to Section 243 (a) Resource Management Act 1991 (affects DP 301727)

Appurtenant hereto is a right of way and a right to drain, convey, take and store water, transmit telecommunications and electricity specified in Easement Certificate 5069118.15 - 8.8.2001 at 9:05 am

Some of the easements specified in Easement Certificate 5069118.15 are subject to Section 243 (a) Resource Management Act 1991 (affects DP 301727)

Appurtenant hereto is a right to drain sewage & stormwater and a right to batter support created by Easement Instrument 5617439.7 - 11.6.2003 at 9:00 am

The easements created by Easement Instrument 5617439.7 are subject to Section 243 (a) Resource Management Act 1991

5934684.2 Surrender of the right to convey water marked a-b DP 316173 and partial surrender of the right to convey water marked a-b DP 301727 created by Transfer 877687.6 - produced 17.3.2004 at 9:00 am and entered 11.8.2004 at 9:01 am

6121508.5 Partial surrender of the right to drain stormwater and sewage specified in Easement Instrument 5617439.7 - 20.8.2004 at 9:00 am

Appurtenant hereto are rights to drain sewage and water, convey electricity, water and irrigation water and gas and transmit telecommunications created by Easement Instrument 6121508.15 - 20.8.2004 at 9:00 am

The easements created by Easement Instrument 6121508.15 are subject to Section 243 (a) Resource Management Act 1991

Appurtenant hereto is a right to drain water and sewage, right to convey electricity, water, gas, telecommunications and computer media created by Easement Instrument 6165403.3 - 30.9.2004 at 9:00 am

Subject to a right of way over part Lot 4 DP 453236 marked E on DP 453236 and a right to convey water over part Lot 1 DP 443715 marked AB, ZA, ZB, ZC, QA and QB on DP 443715 created by Easement Instrument 6318687.6 - 21.2.2005 at 9:00 am

The easements created by Easement Instrument 6318687.6 are subject to Section 243 (a) Resource Management Act 1991

Appurtenant hereto is a right of way created by Easement Instrument 6318687.8 - 21.2.2005 at 9:00 am

The easements created by Easement Instrument 6318687.8 are subject to Section 243 (a) Resource Management Act 1991

Subject to a right (in gross) to convey telecommunications over part Lot 4 DP 453236 marked E on DP 453236 in favour of Telecom New Zealand Limited created by Easement Instrument 6318687.13 - 21.2.2005 at 9:00 am

The easements created by Easement Instrument 6318687.13 are subject to Section 243 (a) Resource Management Act 1991

Subject to a right (in gross) to convey electricity, establish & maintain an electricity transformer and ancillary equipment and establish and maintain switchgear and ancillary equipment over part Lot 4 DP 453236 marked E, AB and AE on DP 453236 and over part Lot 1 DP 443715 marked PA, PB and AAA on DP 443715 in favour of Aurora Energy Limited created by Easement Instrument 6318687.15 - 21.2.2005 at 9:00 am

The easements (except right to establish & maintain switchgear & ancillary equipment) created by Easement Instrument 6318687.15 are subject to Section 243 (a) Resource Management Act 1991 (affects DP 338474)

Land Covenant in Deed 6500277.1 - 19.7.2005 at 9:00 am

Subject to a right of way over part Lot 4 DP 453236 marked AI, AA, AB, AC, AH and E on DP 453236 created by Easement Instrument 6756101.8 - 17.2.2006 at 9:00 am

Appurtenant hereto are rights to drain sewage and appurtenant to part Lot 1 DP 443715 formerly Lot 43 DP 359527 is a right of way and rights to convey water created by Easement Instrument 6756101.8 - 17.2.2006 at 9:00 am

Some of the easements created by Easement Instrument 6756101.8 are subject to Section 243 (a) Resource Management Act 1991 (affects DP 359527)

Subject to a right (in gross) to convey telecommunications and computer media over part Lot 4 DP 453236 marked AI, AA, AB, AC, AH and E on DP 453236 in favour of Telecom New Zealand Limited created by Easement Instrument 6756101.9 - 17.2.2006 at 9:00 am

The right to convey telecommunications easement in gross created by Easement Instrument 6756101.9 is subject to Section 243 (a) Resource Management Act 1991

Subject to a right (in gross) to store and convey liquefied petroleum gas over part Lot 4 DP 453236 marked AI, AA, AB, AC, AH and E on DP 453236 in favour of On Gas Limited created by Transfer 6756101.10 - 17.2.2006 at 9:00 am

Subject to a right (in gross) to convey electricity over part Lot 4 DP 453236 marked AI, AA, AB, AC, AH and E on DP 453236 in favour of Aurora Energy Limited created by Easement Instrument 6756101.11 - 17.2.2006 at 9:00 am

The easements created by Easement Instrument 6756101.11 are subject to Section 243 (a) Resource Management Act 1991

7326314.3 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 18.4.2007 at 9:00 am (Affects Lot 4 DP 453236 & part Lot 1 DP 443715 formerly Lot 1 DP 442848)

Subject to a right of way over part Lot 4 DP 453236 marked AI, AA, AB, AC, AD, AE, AF, AG, AH and E on DP 453236 and a right to convey electricity over part Lot 4 DP 453236 marked AB, AD, AE and AF on DP 453236 created by Easement Instrument 7326314.6 - 18.4.2007 at 9:00 am

Appurtenant to part Lot 1 DP 443715 formerly Lot 1 DP 442848 is a right of way, a right to convey electricity and rights to convey water, telecommunications and computer media created by Easement Instrument 7326314.6 - 18.4.2007 at 9:00 am

The easements created by Easement Instrument 7326314.6 are subject to Section 243 (a) Resource Management Act 1991

Subject to a right of way over part Lot 1 DP 443715 marked AB, AC, AA, AAA, AAB, PA and PB on DP 442848 created by Easement Instrument 7326314.7 - 18.4.2007 at 9:00 am

The easements created by Easement Instrument 7326314.7 are subject to Section 243 (a) Resource Management Act 1991 Appurtenant to part Lot 1 DP 443715 formerly Lot 1 DP 442848 is a right to convey water created by Easement Instrument 7326314.8 - 18.4.2007 at 9:00 am

The easements created by Easement Instrument 7326314.8 are subject to Section 243 (a) Resource Management Act 1991 Appurtenant to Lot 4 DP 453236 herein is a right of way and right to drain water created by Easement Instrument 7858813.1 - 26.6.2008 at 9:00 am

Subject to a right of way over part Lot 4 DP 453236 marked AI, AA, AB, AC, AD, AE, AF, AG, AH and E on DP 453236 created by Easement Instrument 7919600.5 - 27.8.2008 at 9:00 am

The easements created by Easement Instrument 7919600.5 are subject to Section 243 (a) Resource Management Act 1991 Land Covenant in Easement Instrument 8055185.2 - 27.1.2009 at 9:00 am (affects Lot 4 DP 453236)

Subject to a right to convey water over part Lot 1 DP 443715 marked JJ, ZA, AB & ZC and a right to store water over part Lot 1 DP 453236 marked ZB all on DP 443715 created by Easement Instrument 8073020.4 - 13.2.2009 at 3:07 pm

Land Covenant in Easement Instrument 8854807.10 - 5.10.2011 at 11:36 am (Affects Lot 1 DP 443715)

Land Covenant in Easement Instrument 8854807.11 - 5.10.2011 at 11:36 am (Affects Lot 1 DP 443715)

Land Covenant in Easement Instrument 8854807.12 - 5.10.2011 at 11:36 am (Affects Lot 1 DP 443715)

Subject to Section 241(2) Resource Management Act 1991 (affects DP 453236)

Land Covenant in Easement Instrument 9211218.15 - 4.12.2012 at 3:57 pm (Affects Lot 1 DP 443715)

Land Covenant in Easement Instrument 9211218.16 - 4.12.2012 at 3:57 pm (Affects Lot 1 DP 443715)

Land Covenant in Easement Instrument 9211218.17 - 4.12.2012 at 3:57 pm (Affects Lot 1 DP 443715)

Land Covenant in Easement Instrument 9211218.18 - 4.12.2012 at 3:57 pm (Affects Lot 1 DP 443715)

Subject to a right of way over part Lot 4 DP 453236 marked AA, AB, AC and AH and a right to convey water over part Lot 4 DP 453236 marked AD, AE and AH all on DP 453236 created by Easement Instrument 9211218.20 - 4.12.2012 at 3:57 pm

The easements created by Easement Instrument 9211218.20 are subject to Section 243 (a) Resource Management Act 1991

Subject to a right to store water over part Lot 1 DP 443715 marked ZH, a right to convey water over part Lot 1 DP 443715 marked ZG and W and a right to convey electricity over part Lot 1 DP 443715 marked P and W all on DP 453236 created by Easement Instrument 9211218.26 - 4.12.2012 at 3:57 pm

The easements created by Easement Instrument 9211218.26 are subject to Section 243 (a) Resource Management Act 1991 9753683.1 Encumbrance to Anthony Craig Paterson, Susan Mary Paterson, Helen Christine Wilding, David Douglas Duncan, Jane Coventry Duncan, Justin John Abbiss, Caroline Elizabeth Abbiss, Veritas (2011) Limited, Daniel Robert Foggo, Rebecca Richwhite and Veritas (2012) Limited - 26.6.2014 at 9:56 am

Subject to a right to convey electricity and water, a right to draw, store and pump water over Lot 4 DP 453236 marked E on DP 511902 created by Easement Instrument 10863393.3 - 4.8.2017 at 2:30 pm

Subject to a right to convey irrigation water over part Lot 1 marked A on DP 529769 and over part Lot 1 marked ZA, ZB, AB and ZC on DP 443715 and a right to store water over part marked ZB on DP 443715 created by Easement Instrument 11259005.1 - 22.11.2018 at 4:55 pm

Subject to a right to convey water over part Lot 1 marked QA and QB and a right to store water over part Lot 1 marked ZB on DP 443715 created by Easement Instrument 11259005.2 - 22.11.2018 at 4:55 pm

Approved by Registrar-General of Land under No. 2002/6055

Easement instrument to grant easement or profit à prendre, or create land covenant
Sections 90A and 90F, Land Transfer Act 1952

EI 6756101.8 Easement I

Land registration district

OTAGO



Copy - 01/01, Pgs - 003, 16/02/06, 10:20



DocID: 110721869

Grantor

Surname(s) must be underlined or in CAPITALS:

BENDEMEER ESTATES LIMITED

Grantee

Surname(s) must be underlined or in CAPITALS.

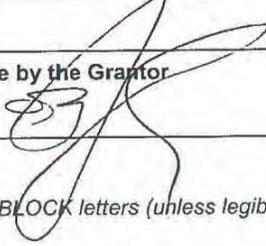
BENDEMEER ESTATES LIMITED

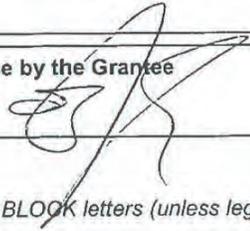
Grant* of easement or profit à prendre or creation or covenant

The Grantor, being the registered proprietor of the servient tenement(s) set out in Schedule A, grants to the Grantee (and, if so stated, in gross) the easement(s) or profit(s) à prendre set out in Schedule A, or creates the covenant(s) set out in Schedule A, with the rights and powers or provisions set out in the Annexure Schedule(s).

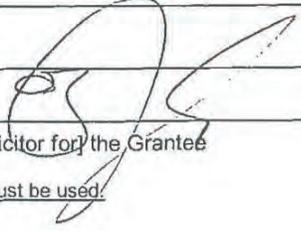
Dated this 16 day of January 2006

Attestation

 Director	Signed in my presence by the Grantor
	Signature of witness 
	Witness to complete in BLOCK letters (unless legibly printed)
	Witness name Occupation Andrew Bryce Jack Solicitor Queenstown Address
Signature [common seal] of Grantor	

 Director	Signed in my presence by the Grantee
	Signature of witness 
	Witness to complete in BLOCK letters (unless legibly printed)
	Witness name Occupation Andrew Bryce Jack Solicitor Queenstown Address
Signature [common seal] of Grantee	

Certified correct for the purposes of the Land Transfer Act 1952.


[Solicitor for] the Grantee

*If the consent of any person is required for the grant, the specified consent form must be used.

REF: 7003 - AUCKLAND DISTRICT LAW SOCIETY

Annexure Schedule 1



Easement instrument

Dated

16 January 2006

Page

1

of

2

pages

Schedule A

(Continue in additional Annexure Schedule if required.)

Purpose (nature and extent) of easement, profit, or covenant	Shown (plan reference)	Servient tenement (Identifier/CT)	Dominant tenement (Identifier/CT or in gross)
Right of Way	'A' 'B' 'E' 'F' DP 359527 'H' 'I' 'J' DP 359527	Lot 1 DP 359257 (CT 242348) Lot 39 DP 359527 (CT 242349)	Lot 43 DP 359527 (CT 242353) Lot 40 DP 359527 (CT 242350)
Right to Drain Sewage	'M' 'X' 'W' DP 359527 'C' 'D' 'G' 'H' 'I' 'J' DP 359527	Lot 44 DP 359527 (CT 242354) Lot 39 DP 359527 (CT 242352)	Lot 43 DP 359527 (CT 242353) Lot 1 DP 359527 (CT 242348)
Continued on Annexure Schedule			

Easements or profits à prendre rights and powers (including terms, covenants, and conditions)

Delete phrases in [] and insert memorandum number as required.
Continue in additional Annexure Schedule if required.

Unless otherwise provided below, the rights and powers implied in specific classes of easement are those prescribed by the Land Transfer Regulations 2002 and/or the Ninth Schedule of the Property Law Act 1952.

The implied rights and powers are ~~varied~~ ~~negatived~~ ~~added to~~ or ~~substituted~~ by:

~~[Memorandum number _____, registered under section 155A of the Land Transfer Act 1952].~~
~~[the provisions set out in Annexure Schedule 2].~~

Covenant provisions

Delete phrases in [] and insert memorandum number as required.
Continue in additional Annexure Schedule if required.

The provisions applying to the specified covenants are those set out in:

~~[Memorandum number _____, registered under section 155A of the Land Transfer Act 1952].~~
~~[Annexure Schedule 2].~~

All signing parties and either their witnesses or solicitors must sign or initial in this box

Annexure Schedule



Insert type of instrument
"Mortgage", "Transfer", "Lease" etc

Easement

Dated 16 January 2006

Page 2 of 2 Pages

(Continue in additional Annexure Schedule, if required.)

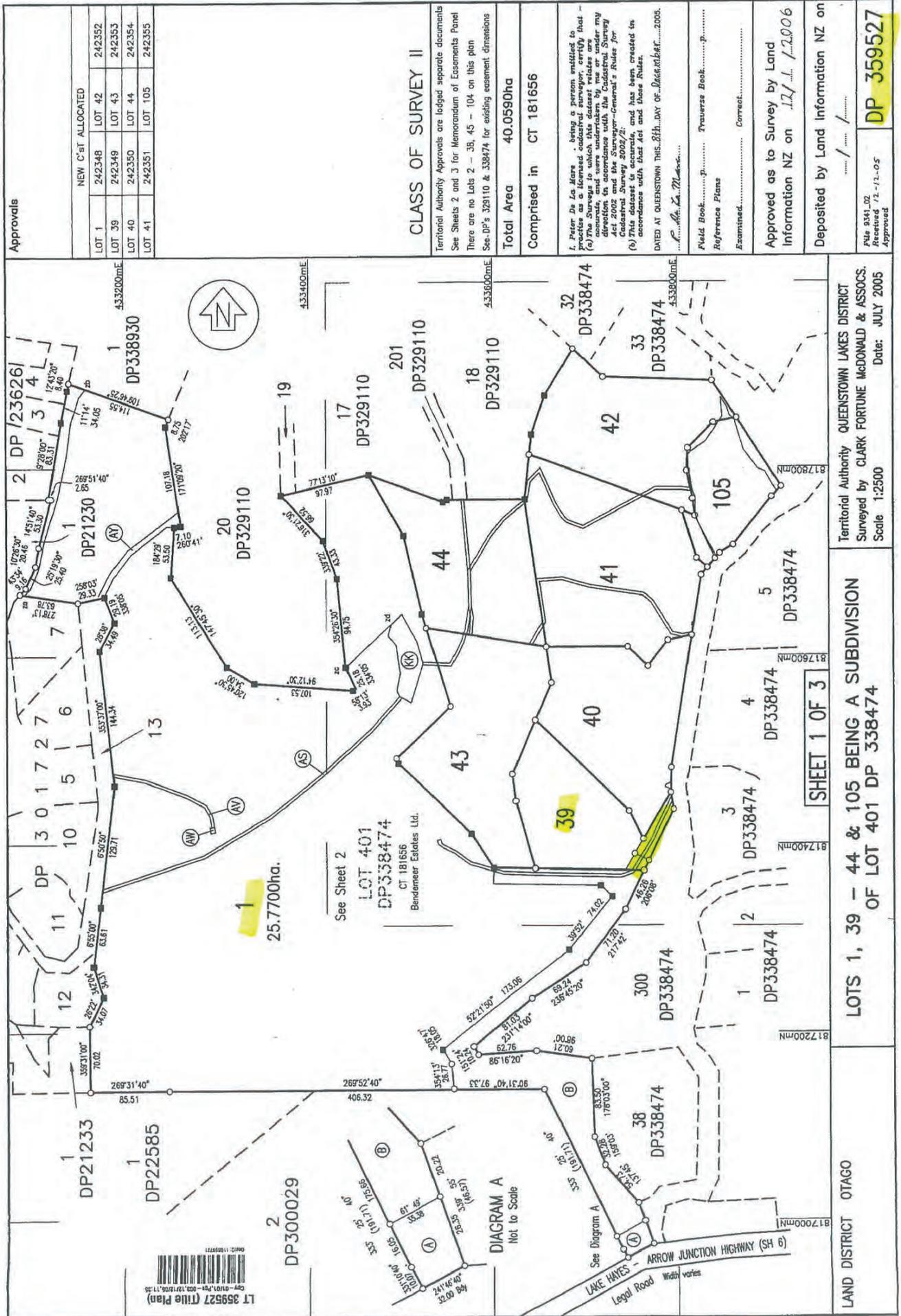
CONTINUATION OF SCHEDULE A

Purpose	Shown	Servient Tenement	Dominant Tenement
Right to Convey Water	'L' DP 359527	Lot 41 DP 359527 (CT 242351)	Lot 43 & 44 DP 359527 (CT's 242353 & 242354)
	'V' DP 359527	Lot 44 DP 359527 (CT 242354)	Lot 43 DP 359527 (CT 242353)
	'J' DP 359527	Lot 39 DP 359527 (CT 242349)	Lot 40 DP 359527 (CT 242350)

CONTINUATION OF RIGHTS AND POWERS:

Where there is a conflict between the provisions of Schedule 4 to the Land Transfer Regulations 2002 and the Ninth Schedule to the Property Law Act 1952 the provisions of the Ninth Schedule must prevail.

If this Annexure Schedule is used as an expansion of an instrument, all signing parties and either their witnesses or solicitors must sign or initial in this box.



Approvals

NEW C'st ALLOCATED	
LOT 1	242348
LOT 2	242349
LOT 3	242350
LOT 4	242351
LOT 5	242352
LOT 6	242353
LOT 7	242354
LOT 8	242355

CLASS OF SURVEY II

Territorial Authority Approvals are lodged separate documents. See Sheets 2 and 3 for Memorandum of Encumbrances Panel. There are no Lots 2 - 38, 45 - 104 on this plan. See DP's 329110 & 338474 for existing easement dimensions.

Total Area 40.0590ha
Comprised in CT 181656

I, Peter De La Mare, being a person entitled to practise as a Surveyor, do hereby certify that the Survey to which this dataset relates was conducted in accordance with the Cadastral Survey Act 2002/2003. This dataset is accurate, and has been created in accordance with that Act and those Rules.

DATED AT QUEENSTOWN THIS 28th DAY OF December 2005.
 Peter De La Mare

Field Book.....p..... Traverse Book.....p.....
 Reference Plans.....
 Examined..... Correct.....

Approved as to Survey by Land Information NZ on 12/1/2006

Deposited by Land Information NZ on

File 359527
 Approved

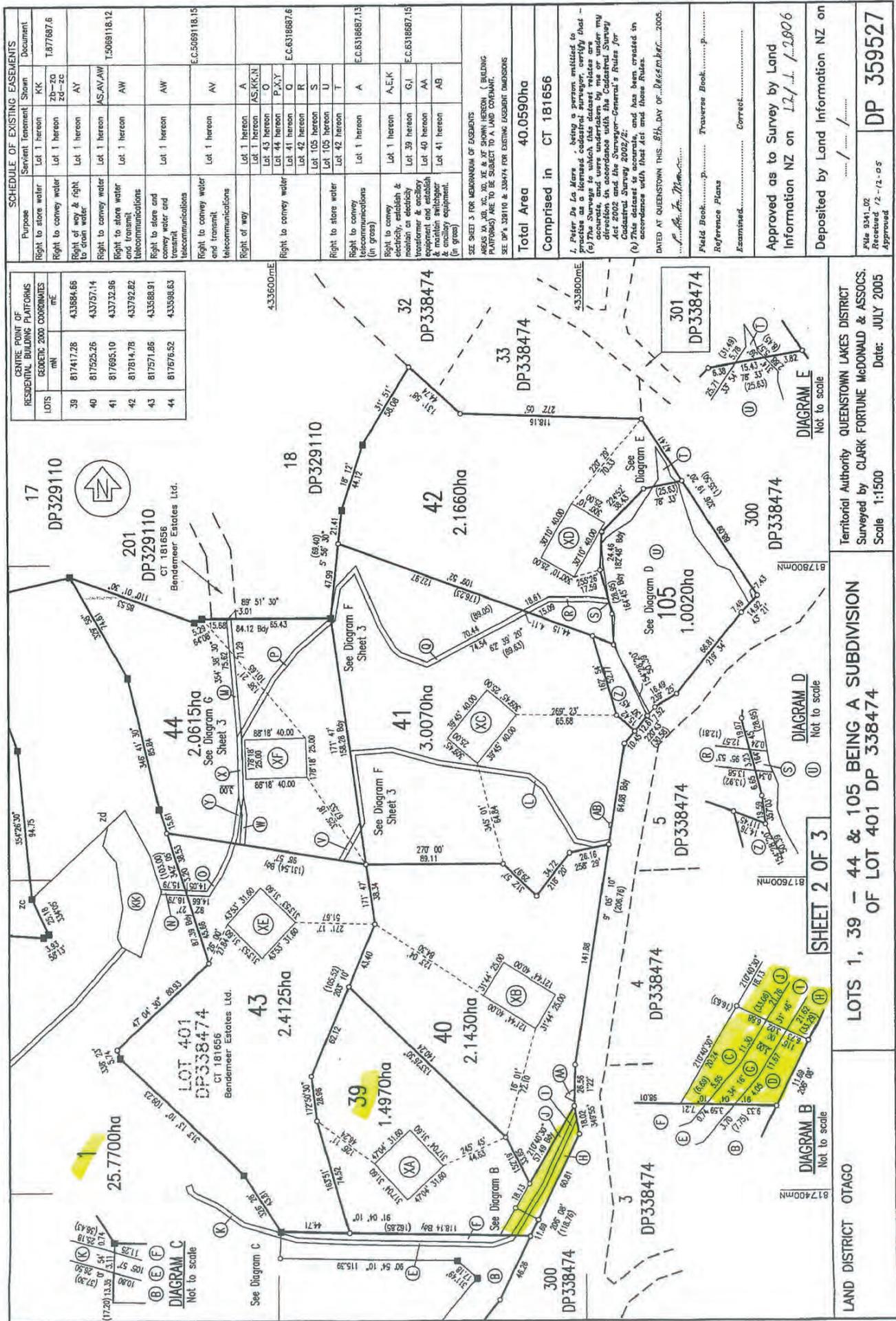
Territorial Authority QUEENSTOWN LAKES DISTRICT
 Surveyed by CLARK FORTUNE McDONALD & ASSOC.
 Scale 1:2500
 Date: JULY 2005

LOTS 1, 39 - 44 & 105 BEING A SUBDIVISION OF LOT 401 DP 338474

LAND DISTRICT OTAGO

SHEET 1 OF 3





CENTRE POINT OF RESIDENTIAL BUILDING PLATFORMS		
LOTS	GEOMETRIC 2000 COORDINATES	mE
39	817417.28	433684.66
40	817525.26	433757.14
41	817695.10	433732.96
42	817814.78	433792.82
43	817571.86	433588.91
44	817676.52	433598.63

SCHEDULE OF EXISTING EASEMENTS		
Purpose	Servient Tenement	Shown Document
Right to store water	Lot 1 heron	KK
Right to convey water	Lot 1 heron	ZB-20
Right of way & right to drain water	Lot 1 heron	ZC-2C
Right to convey water	Lot 1 heron	AY
Right to store water and transmit telecommunications	Lot 1 heron	AS,AV,AW
Right to store water and transmit telecommunications	Lot 1 heron	AW
Right to convey water and transmit telecommunications	Lot 1 heron	AW
Right to convey water and transmit telecommunications	Lot 1 heron	AV
Right of way	Lot 1 heron	A
Right to convey water	Lot 1 heron	AS,KK,N
Right to convey water	Lot 43 heron	O
Right to convey water	Lot 44 heron	P,X,Y
Right to convey water	Lot 41 heron	Q
Right to convey water	Lot 42 heron	R
Right to convey water	Lot 105 heron	S
Right to convey water	Lot 105 heron	U
Right to convey water	Lot 42 heron	T
Right to convey telecommunications	Lot 1 heron	A
Right to convey electricity, establish & maintain an electricity transformer & conductors & cables, establish & maintain telegraph & mailboxes & ancillary equipment.	Lot 1 heron	A,E,K
Right to convey telecommunications	Lot 39 heron	G,I
Right to convey telecommunications	Lot 40 heron	AA
Right to convey telecommunications	Lot 41 heron	AB

SEE SHEET 3 FOR LEGISLATION OF EASEMENTS
SEE SHEET 3 FOR THE PLAN OF CONVEYANCE (BUILDING PLATFORMS) ARE TO BE SUBJECT TO A LAND CONVEYANCE
SEE DP's 338110 & 338474 FOR EXISTING EASEMENT DIMENSIONS

Total Area 40.0590ha
Comprised in CT 181656

J. Peter De La Mare being a person entitled to the Survey to which this dataset relates and -
(a) The Survey was undertaken by me or under my direction in accordance with the Cadastral Survey Act 2002 and the 2002 Survey-General's Rules for Cadastral Survey
(b) This dataset is accurate, and has been created in accordance with that Act and those Rules.
DATED AT QUEENSTOWN THIS... DAY OF... 2005.

Field Book.....
Reference Plans.....
Examined.....

Approved as to Survey by Land Information NZ on 12/1/2006

Deposited by Land Information NZ on

File 354_02
Received 12-12-05
Approved
DP 359527

Territorial Authority QUEENSTOWN LAKES DISTRICT
Surveyed by CLARK FORTUNE McDONALD & ASSOCS.
Scale 1:1500
Date: JULY 2005

LAND DISTRICT OTAGO
SHEET 2 OF 3
LOTS 1, 39 - 44 & 105 BEING A SUBDIVISION OF LOT 401 DP 338474

DIAGRAM A Not to scale
DIAGRAM B Not to scale
DIAGRAM C Not to scale
DIAGRAM D Not to scale
DIAGRAM E Not to scale
DIAGRAM F Not to scale
DIAGRAM G Not to scale
DIAGRAM H Not to scale
DIAGRAM I Not to scale
DIAGRAM J Not to scale
DIAGRAM K Not to scale
DIAGRAM L Not to scale
DIAGRAM M Not to scale
DIAGRAM N Not to scale
DIAGRAM O Not to scale
DIAGRAM P Not to scale
DIAGRAM Q Not to scale
DIAGRAM R Not to scale
DIAGRAM S Not to scale
DIAGRAM T Not to scale
DIAGRAM U Not to scale
DIAGRAM V Not to scale
DIAGRAM W Not to scale
DIAGRAM X Not to scale
DIAGRAM Y Not to scale
DIAGRAM Z Not to scale

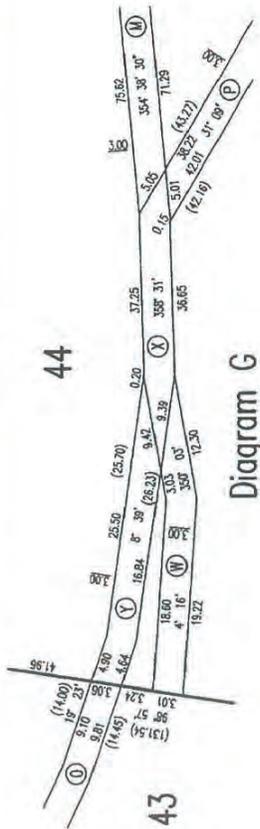


Diagram G
Not to Scale

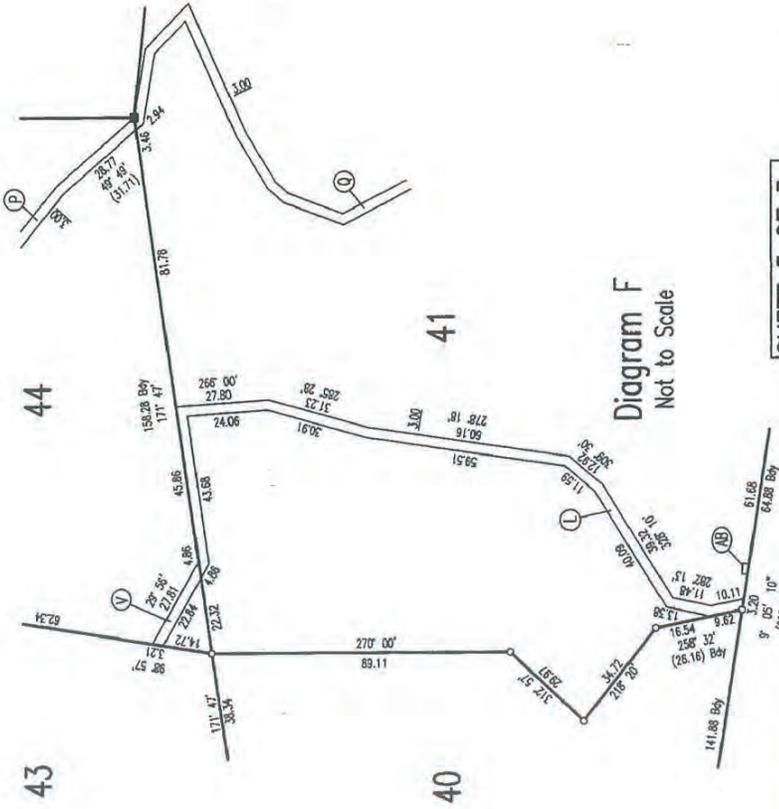


Diagram F
Not to Scale

SHEET 3 OF 3

LAND DISTRICT OTAGO
LOTS 1, 39 - 44 & 105 BEING A SUBDIVISION
OF LOT 401 DP 338474

Territorial Authority QUEENSTOWN LAKES DISTRICT
Surveyed by CLARK FORTUNE McDONALD & ASSOCS.
Scale NTS Date: JULY 2005

MEMORANDUM OF EASEMENTS		
Purpose	Servient Tenement	Dominant Tenement
Right of way	Lot 1 hereon	A, B, E, F Lot 43 hereon
Right of way	Lot 39 hereon	H, I, J Lot 40 hereon
Right to drain sewage	Lot 44 hereon	M, X, W Lot 43 hereon
Right to convey water	Lot 41 hereon	L Lots 43 & 44 hereon
	Lot 44 hereon	V Lot 43 hereon

MEMORANDUM OF EASEMENTS IN GROSS			
Purpose	Servient Tenement	Shown	Dominant Tenement
Right to convey electricity	Lot 1 hereon	A, B, E, F	Aurora Energy Limited
	Lot 39 hereon	G, H, I, J	
	Lot 44 hereon	M, X, W	
	Lot 105 hereon	Z	
Right to convey telecommunications	Lot 1 hereon	A, B, E, F	Telecom New Zealand Limited
	Lot 39 hereon	G, H, I, J	
	Lot 44 hereon	M, X, W	
	Lot 105 hereon	Z	

PROPOSED EASEMENTS		
Purpose	Servient Tenement	Dominant Tenement
Right to drain sewage	Lot 39 hereon	C, D, G Lot 1 hereon
	Lot 44 hereon	H, I, J
Right of Way	Lot 105 hereon	Z Lot 42 hereon

SEE DP'S 329110 & 338474 FOR EXISTING EASEMENT DIMENSIONS
Total Area 40.0590ha
Comprised in CT 181656

I, Peter De La Mare, being a person entitled to practice as a registered surveyor, do hereby certify that the Survey to which this Deed relates are accurate, and were undertaken by me or under my direction in accordance with the Cadastral Survey Act 2002 and the Survey-General's Rules for Cadastral Surveys 2002/2.
(b) This Deed is correct, and has been created in accordance with that Act and those Rules.
DATED AT QUEENSTOWN THIS 8th DAY OF December 2005.
Peter De La Mare

Field Book.....p..... Traverse Book.....p.....
Reference Plans.....
Examined..... Correct.....

Approved as to Survey by Land Information NZ on 12/11/2006

Deposited by Land Information NZ on

File 0341 05
Received 12/12/05
Approved
DP 359527



GeoSolve Ref: 210907
30 November 2021

Bridget & Mike Davis
c/o Shane Muir
shane@insignis.co.nz

Attention: Mike & Bridget Davies

Geotechnical Review 903 Lake Hayes -Arrow Junction Highway

1 Introduction

In accordance with our Agreement dated 18 November 2021 (ref. 210907) we have undertaken a review of the proposed development at 903 Lake Hayes-Arrow Junction Highway.

The assessment has comprised a site inspection and a desktop review of existing information. Drawings of the proposed development have been provided.

The aim of this assessment is to:

- Provide comment on the suitability of the site for the proposed development from a geotechnical perspective,
- Identify any geotechnical issues that should be considered at the detailed design stage;
- Support a resource consent application for the project.

The location of the site is shown on Figure 3.1 below.

2 Proposed Development

The development comprises a single storey dwelling and a separate guest house. The development also includes parking courts, footpaths and recontouring/landscaping of the surrounding area.

A site plan, Figure 1 attached, shows the proposed building footprint and development layout.

Most of the development will be at a similar level to the current building however earthworks will be required in some locations. On the north eastern side cuts of between approximately 1 and 3 m will be required for the motor court, garage and northernmost bedroom. On the south western side the buildings extend a short distance out from the crest of the slope and engineered fill is likely to be required under floor slabs along this section of the building.

3 Site Description

The site is located on the western side of the low hills present between Lake Hayes and the Bendemeer Subdivision, see figure 3.1 below. The existing building and proposed new building location are present on a natural bench which provides a 'relatively level' surface.

Immediately to the south west of the proposed building location the ground slopes steeply down to other residential properties and the Lake Hayes – Arrowtown Road. On the eastern side the ground surface climbs gradually up a short distance through mixed undeveloped land and residential properties.

Directly north of the existing and proposed buildings a natural hollow and pond are present. A general view of the is shown on Photograph 1 below.

The separate guest house is located south of the main house building. In this area the ground slopes moderately to the south west and currently comprises undeveloped land.



Figure 1.1 Site Location Plan



Photograph 1. General view of the development site looking east and showing the existing house and the pond to the north. The proposed house will be located in approximately the same area and will extend north towards the pond.

4 Site Geology

Published Geological mapping¹ indicates the site surface geology comprises schist bedrock. No fault traces or other notable geological features are shown in the area.

Site mapping confirms the published geology with several exposures of schist observed in close proximity to the building platform. In addition, thin deposits of topsoil, colluvium, loess and glacial till are present. The schist foliation has been measured on several outcrops around the wider hillside surrounding the platform and consistently dips at approximately 40-60° to 245-270° (south west). The schist is moderately weathered at the surface.

It is possible that uncontrolled fill, placed during the construction of the existing dwelling, is present on the crest of the slopes immediately to the south west of the current and proposed building. Uncontrolled fill may also be present beneath the current building and around the garden and pool area.

5 Review of Natural Hazards

A review of natural hazards is provided in this Section.

Liquefaction

The site is not with a liquefaction hazard zone on the QLDC hazard mapping². The risk of liquefaction at the site is considered to be low to nil, the following reasons are provided:

- The site is elevated above the surrounding land and the regional water table will be several 10's of metres below building level and within bedrock.
- Glacial till soil types and schist bedrock are not susceptible to liquefaction.

¹ IGNS, 1:250,000 Map 18, Wakatipu

² <http://maps.qldc.govt.nz>

Very locally around the pond, some saturation of the surrounding soils may be present and some minor disturbance during a seismic event may occur. This is considered a relatively minor issue which should be considered at the detailed design and investigation stage. It is noted that edge of the pond will be re-contoured which will provide the opportunity to include remedial measures if required.

Slope Stability

No deep-seated slope stability issues are known in this location and none are shown on QLDC hazard mapping. The schist foliation is consistent across this area of the hillside indicating the underlying bedrock is 'in-situ' and hasn't been displaced.

Shallow instability was observed on the slopes immediately to the south west of the existing and proposed building locations. The approximate extent of the instability is shown on Figure 1, attached, and Photographs 2 and 3 below. The instability appears to be restricted to shallow surface soil, and possible some surficial weathered rock (< 1 m in depth). The instability does not appear to extend up to the existing building platform.

A slope stability assessment will need to be undertaken for the south western area of the proposed building. If required, excavation of any affected shallow instability areas and/or extending footings to bear on competent ground at depth are expected to provide suitable engineering solutions.



Photograph 2. Instability on the south western slope, showing a shallow rock slip surface and shallow slip material comprising soil beneath.



Photograph 3. Instability on the south western slope, shallow soil creep.

An easement noted as 'right to convey water' is shown a short distance west of the house. The easement passes down the slope to the south western area of the building where the shallow instability has been identified. Shallow services in this area will be affected by the identified movement. Any services in this easement will need to consider slope instability. Deepening the services is expected to provide a suitable solution.

Seismic

A significant seismic risk exists in this region from potentially strong ground shaking, associated with rupture of the Alpine Fault, located 80 km northwest from Queenstown. There is a high probability that an earthquake with an expected magnitude of over M_w 8 will occur along the Alpine Fault within the next 50 years. Seismic loads will need to be considered for the slope stability assessment outlined above for the south western slopes.

Rock Fall/Rock Roll

No rock fall or rock roll risk has been identified at the site.

Alluvial Fan.

No alluvial fan activity has been identified at the site.

6 Preliminary Engineering Considerations and Recommendations for Detailed Assessment

Following demolition of the existing building, a test pit investigation and assessment should be undertaken to assist with the detailed design of development. The following aspects will need to be considered:

- The soil profile and depth to rock beneath the building footprint, and foundation bearing capacity.
- The presence of soft/saturated sediments around the edge of the pond, and in the pond, and any design implications for the nearby building foundations and earthworks.
- The stability of the slopes immediately to the south west of the property, the identified shallow instability, seismic performance, and any specific foundation requirements.
- Conformation of design parameters for the retaining walls on the eastern side of the property.
- General engineering issues and geotechnical conditions as appropriate for this type of development.
- Services constructed in the easement located west of the property will need to consider slope stability.

Preliminary assessment indicates building foundations are likely to bear on schist rock, or glacial soils. Specific engineering design and locally deepening foundations may be required in some areas to address the issues outlined above.

7 Conclusion

The assessment indicates the site is suitable for the proposed residential development from a geotechnical perspective.

There are some local geotechnical issues that will require to be considered by specific investigation. This should be undertaken at the detailed design stage following demolition of the existing building, when excavator access is feasible.

Yours faithfully,



Paul Faulkner
Senior Engineering Geologist

Attachment: Figure 1 Site Summary Plan

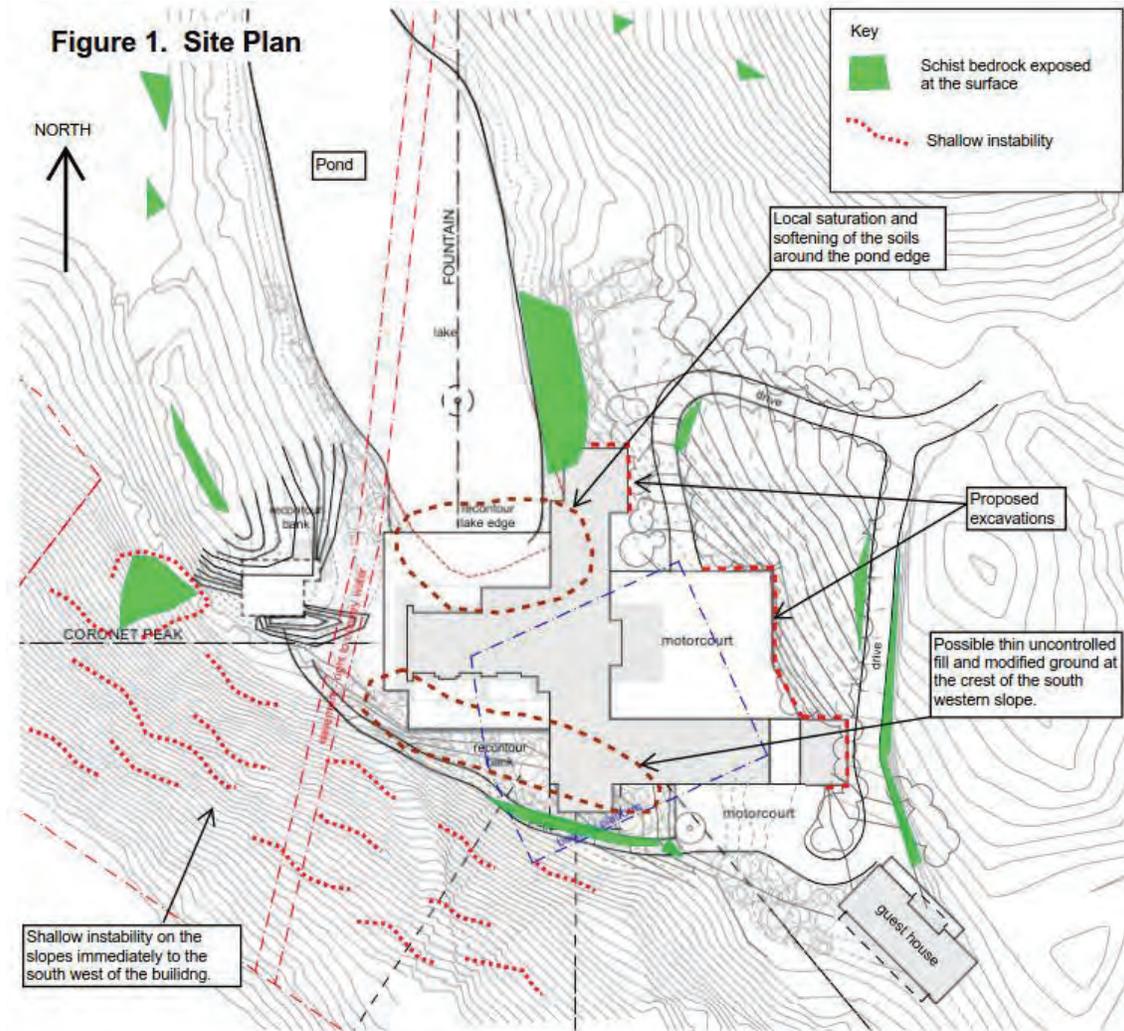


Figure 1. Site Plan



Ref: 21174

11 January, 2021

WM Davies

903 Lake Hayes-Arrow Junction Highway

Arrowtown, 9371

RE: WM Davies Water Quality Improvement Assessment

1 Introduction

The Davies wish to rebuild the home on their property (Lot 3 SDP 415165 (Parcel 9941)) (Attachment Figure 1 and Figure 2). This property lies within the Lake Hayes catchment. Therefore, it is subject to Policy 24.2.4.2 of the Queenstown Lakes District Council Proposed District Plan; *“Restrict the subdivision, development and use of land in the Lake Hayes catchment, unless it can contribute to water quality improvement in the catchment commensurate with the nature, scale and location of the proposal.”*

1.1 Purpose

The purpose of this report is to assess the water quality improvement associated with this home rebuild on the property and change from onsite wastewater disposal to a reticulated wastewater sewer connection with respect to QLDC Policy 24.2.4.2.

1.2 Scope of Work

Assessment of water quality improvement opportunities at the site were based on:

- 1) Field reconnaissance of existing hydrological, water quality, and ecological conditions across the site;

- 2) Topography and photogrammetry based analysis of site conditions and location in the Lake Hayes catchment;
- 3) Mapping of natural inland wetlands and constructed ponds;
- 4) Examination of proposed building and site plans;
- 5) Confirmation from landowners that the new home will be connected to QLDC's reticulated wastewater sewer system. See report from Chris Hansen of Clark Fortune MacDonald (CFMA) documenting this.
- 6) Confirmation from the landowners that the existing onsite wastewater disposal system will be decommissioned without contributing additional waste to the property and Lake Hayes. See report from Chris Hansen of Clark Fortune MacDonald (CFMA) documenting this.

1.3 Limitations

The findings of this report are based on the Scope of Work outlined above. e3Scientific Limited (e3s) performed the services in a manner consistent with the normal level of care and expertise exercised by members of the environmental science profession. No warranties, express or implied, are made. The confidence in the findings is limited by the Scope of Work.

The results of this assessment are based upon desktop analysis and site inspections conducted by e3s personnel. All conclusions and recommendations regarding the property are the professional opinions of e3s personnel involved with the project, subject to the qualifications made above. While normal assessments of data reliability have been made, e3s assumes no responsibility or liability for errors in any data obtained from regulatory agencies, statements from sources outside e3s, or developments resulting from situations outside the scope of this project.

2 Background

Lake Hayes is a well-known community, national, and international natural resource that has experienced significant water quality degradation due to human alteration of the catchment landscape. Lake Hayes degraded water quality is well documented, and it is accepted that Lake Hayes is significantly impaired. The lake has suffered from historic and ongoing elevated fluxes of sediment, phosphorus, *Escherichia coli* (*E. coli*), and nitrogen due to historic and ongoing land, wetland, and stream disturbance in its catchment. The rapid growth and development surrounding Lake Hayes is well chronicled and has

resulted in a eutrophic lake that experiences noxious algal blooms, dangerous *E. coli* contamination events, and ecological and recreational use impairment.

In order to begin to restore the lake, fluxes of sediment, phosphorus, *E. coli*, and nitrogen must be reduced throughout the Lake Hayes catchment. This is widely acknowledged and significant resources and community energy from ORC, QLDC, FOLH, Mana Tahuna, Wakatipu Reforestation Trust, university researchers, and a host of other organisations have been directed toward restoring the lake.

3 Site Conditions

3.1 Proposal

The rebuilding proposal includes the removal of the existing structures, addition of a guest house (~128 m²) and an increase in the size of the main house to ~820 m². The proposal includes associated increases in roof extents and impervious surfaces associated with driveway / parking area expansion, outdoor dining areas, and terraces. In addition, repositioning and rotation of the house is proposed. The previously constructed pond would be drained and partially infilled for the house construction. The pond would then be reinstated toward the end of the house construction, though shortened, with a lawn between the house and the pond edge.

The rebuilding proposal also includes a change from onsite wastewater disposal to the QLDC reticulated sewer (See accompanying report from Chris Hansen of Clark Fortune MacDonald (CFMA) documenting this.

3.2 Current Site Conditions

Current site conditions include an existing house and driveway with the remaining landscape composed of two constructed surface water ponds, a wetland area, and unimproved pasture. The household wastewater disposal is onsite and was communicated to be a septic system and leach field. Please see report by Chris Hansen of Clark Fortune MacDonald (CFMA) for additional details. There is a moderately steep hillside between the property and Lake Hayes as evident in Appendix Figures 1-2 and the photos in Appendix Table 3.

3.3 Surface Water

Current surface water conditions on the site include two perennial constructed surface water ponds (one SW and one in the NE) separated by a small road (Figure 2). Both ponds have been in place since at least the early 2000s based on satellite data and readily available aerial photos. We were unable to accurately locate the property or the ponds in the non-georectified aerial photos from the 1950s and therefore cannot confirm their presence nor absence at that time.

3.3.1 SW constructed Pond

The southwest constructed or at minimum human enhanced pond is a significant feature of the property. Prior to ~2010-2011 the current pond was divided by an earthen causeway that was breached to create one larger pond. The SW pond (~2092 m²) is the largest water body on the property and most relevant with respect to Lake Hayes water quality due to its location and the adjacent proposed building on the site (Figure 2 and Table 1). Currently, there is no surface water outflow from the SW pond. At the SW corner of the pond, subsurface water appears moves toward the slope above Lake Hayes (draining SW). At this location, there is a relatively low saddle where water could flow overland should the water level in the pond rise significantly. Vegetation downgradient of this saddle indicates that water does move via subsurface flow across this area and care should be taken to not breach this low area, allowing water to drain downslope as overland flow.

Table 1 Surface water body and wetland areas

Surface water feature	Area in m ²
Northeast constructed pond	~1582
Southwest constructed pond	~2092
Wetland complex southwest of road	~523 (S) and ~153 (N)

3.3.2 NE Constructed Pond

The northeast human constructed, or at minimum human enhanced, pond (~1582 m²) is located on the north side of the road that divides the property (Figure 2, Table 4). It does not appear to have a significant surface water connection to either the southwest pond or the wetland located just south of the road bisecting the property. The pond appears to have been enhanced (excavated or connected to an additional water source) in the 2006-2007 time frame when it

began to exhibit more persistent and more extensive surface water. The constructed pond also appears to be used for storage and irrigation in the area.

Both the northeast and southwest surface water ponds have been constructed and therefore should not be subject to protection under the National Policy Statement for Freshwater Management 2020 (NPS-FM 2020) and the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NES-FW 2020). See text below and Table 2 for relevant statements as they pertain to these water bodies.

“Where a wetland meets or appears to meet the definition under the RMA, but there is doubt about whether it meets the criteria of a ‘natural inland wetland’ under the NPS-FM, more assessment may be needed. Specifically:

- use a site history to assess whether a wetland has been constructed by artificial means and is being maintained for that purpose (see section 5).”*

We confirmed with historical imagery that the ponds were constructed by artificial means and that they have been maintained as water storage ponds, reservoirs for firefighting, potentially historic stock watering, and as landscaping amenity ponds. Directly relevant excerpts from section 5 (MfE, Defining ‘natural wetlands’ and ‘natural inland wetlands’, 2021) have been included in Table 2.

3.3.3 Wetlands

Wetlands are defined in the Resource Management Act as follows: “Wetland includes permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions.” (RMA 1991). Further, NPS-FM (2020) Policy 6 states: “There is no further loss of extent of natural inland wetlands, their values are protected, and their restoration is promoted.” The intent of Policy 6 is that the extent of all individual natural inland wetlands is maintained – regardless of their ecological state or size. This is to prevent fragmentation of remaining wetland habitat. Therefore, there is no minimum size for a natural wetland. The NPS-FM and Freshwater NES apply to areas of any size that meet the ‘natural wetland’ and ‘natural inland wetland’ definitions (respectively).

Based on those MfE resources and statutes cited above, there are natural inland wetlands with intermittent and ephemeral surface water located between the two constructed surface water ponds located just SW of the road that bisects the

property (Figure 2 and Figure 3 mapped in green outline and Table 5). These wetlands are ~523 (S) and ~153 (N) m² and could be influenced by the nearby road and its drainage. Based on assessment of remote sensing data and aerial photos through time, this wetland exhibits both seasonal (intermittent) and rainfall driven (ephemeral) surface water. Further, they maintain elevated soil moisture across the year based on the observed persistent vegetation greenness relative to the surrounding uplands.

Field mapping of this natural inland wetland was conducted on 16/12/2021 and consisted of 1) assessment of wetland and upland vegetation zones, 2) assessment of site hydrological conditions, and 3) assessment of hydric wetland and upland soils following prescribed procedures outlined in:

- Ministry for the Environment. 2021. Defining 'natural wetlands' and 'natural inland wetlands'. Wellington: Ministry for the Environment.
- Clarkson, B.R. 2013. A vegetation tool for wetland delineation in New Zealand. Manaaki Whenua – Landcare Research. doi:10.7931/J2TD9V77
- Ministry for the Environment. 2021. Wetland delineation hydrology tool for Aotearoa New Zealand. Wellington: Ministry for the Environment.
- Fraser, S., P. Singleton, B. Clarkson. 2018. Hydric soils – field identification guide Envirolink Grant: C09X1702. Prepared for: Tasman District Council. LandCare Research. Manaaki Whenua – Landcare Research. June 2018

We developed preliminary upland – wetland boundaries based on remote sensing, repeat photogrammetry, and LiDAR topography analysis. This remote assessment was corroborated with field wetland identification and boundary adjustment based on vegetation, soils, and hydrology observations. The wetlands were clearly identified and exceeded thresholds for wetland hydric soils, hydrological evidence of saturated conditions and water tables to within 15cm of the ground surface, and wetland vegetation. Please see Appendix B for field documentation associated with wetland assessment.

Table 2 Jurisdictional definitions for surface water bodies and wetlands

Definition or relevant text	Applicable water body
"New and existing wetlands and waterbodies constructed by artificial means are excluded from the NPS-FM definition of a 'natural wetland'. It is not the intent of the NPS-FM or Freshwater NES to regulate activities that affect these wetlands and waterbodies because they should be able to be maintained over time for the purpose for which they were constructed. "	Northeast constructed pond Southwest constructed pond
<p>"'Wetlands constructed by artificial means' include wetlands and waterbodies that have been deliberately constructed by artificial means for a particular purpose, including for any of the following purposes:</p> <ul style="list-style-type: none"> • reservoirs for firefighting • stock watering • water storage ponds • landscaping to create a wetland or waterbody " 	Northeast constructed pond Southwest constructed pond
Natural inland wetland: "...includes permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions." RMA 1991	Wetlands south of property bisecting road

Source for Table 2 above: Section 5.3 of "Defining 'natural wetlands' and 'natural inland wetlands'" guidance to support the interpretation of the National Policy Statement for Freshwater Management 2020 and the Resource Management (National Environmental Standards for Freshwater) Regulations 2020. See Figure 2 for respective pond and wetland locations.

3.4 Groundwater

The property is elevated above the surrounding valley and Lake Hayes in the Bendemeer Lane area and likely does not receive water from regional groundwater flow systems. Instead, the local groundwater flow system is likely shallow perched flow on and above the schist bedrock with interactions between bedrock groundwater and shallow groundwater local in nature and not likely to be significant on the landscape scale. The ponds appear to be surface expressions of both bedrock and shallow perched groundwater flow and have been expanded and likely deepened over time with human intervention.

4 Contributing to Water Quality Improvement

There are several activities associated with the rebuild that have the potential to have negative water quality impacts if not mitigated, including changing the house platform extent, recontouring partial hillsides, infilling part of the existing pond, and decommissioning the existing onsite wastewater system. Connecting the household wastewater to the QLDC reticulated sewer is a clear and significant improvement with respect to Lake Hayes water quality. These are all discussed further in the following subsections.

4.1 House platform change

The house platform change from the existing structure represents an increase in the footprint of the home. This would likely lead to enhanced water runoff from the house site that should be kept onsite to infiltrate into the ground and sustain local groundwater without leading to overland runoff. It is important that the enhanced runoff from impervious surfaces not be delivered overland via the steep downhill pathways (westward) to Lake Hayes before, during, or after demolition and construction.

Demolition of the existing home, and construction of the new home should not represent a significant threat to Lake Hayes water quality if best water quality management practices are implemented with demolition, recontouring, and construction activities. The minimization and management of water, sediment, and nutrients onsite without runoff to adjacent lands downslope and to Lake Hayes is of paramount importance, especially in light of QLDC Policy 24.2.4.2.

4.2 Hillside recontouring

Hillside recontouring to open sight lines to the surrounding mountains (both SW and NE of the existing pond) appear to be modest on the site plans and do not represent a significant threat to Lake Hayes water quality assuming that best water quality management practices are implemented with recontouring and revegetating.

4.3 Pond infill

The building plan, as we understand it, is to drain the pond and infill a section of it for the house construction. Towards the end of the house construction, the pond would be reinstated, though shortened, with a lawn between the house the pond edge. The infill associated with the proposed building platform would permanently impact the constructed pond and reduce the local storage of water onsite. Assuming that all of the current and additional runoff associated with the structures and associated impervious areas (stormwater) will be managed (infiltrated into the ground) and kept onsite then this activity should not have an adverse impact on Lake Hayes water quality.

4.4 Wastewater connection to QLDC sewer system

Household onsite wastewater disposal is one of the sources of undesirable nutrients and household pollutants to soil and groundwater in the Lake Hayes catchment and thereby to the lake itself. Significant efforts have been made to extend the QLDC reticulated sewer system to reduce the reliance on household onsite wastewater disposal. According to the landowner and detailed in the report by Chris Hansen of Chris Hansen Clark Fortune MacDonald (CFMA) the existing onsite wastewater disposal system will be decommissioned following best practices and wastewater will be removed offsite. Further, the new house and guesthouse will be connected to the QLDC reticulated wastewater system.

Connection of the new house to the QLDC reticulated wastewater system will have a significant positive impact on the local soil and groundwater water quality. This would remove a significant Lake Hayes pollutant source given the current onsite wastewater system's proximity to Lake Hayes, shallow depth to bedrock in the area, and the steep gradient downhill to the lake. This represents a direct positive water quality improvement for Lake Hayes and it is our assessment that it is commensurate with the scale of the development intensity increase associated with the new house construction with respect to Queenstown Lakes District Plan Policy 24.2.4.2 requirement to "*contribute to water quality improvement in the catchment commensurate with the nature, scale and location of the proposal*".

5 Summary and Conclusions

e3Scientific performed field and desktop analyses to ascertain the opportunities to minimise the water quality impacts of changing the footprint, adding a guest house, expanding the home and impervious areas, and rebuilding the home on the property. We additionally mapped the existing constructed ponds on the property and mapped natural inland wetlands. We also assessed the opportunities for water quality improvement on the property relative to Lake Hayes and its tributaries.

It is our assessment that this proposal can be commensurate with the scale of the development intensity increase with respect to Queenstown Lakes District Plan Policy 24.2.4.2 requirement to "*contribute to water quality improvement in the catchment commensurate with the nature, scale and location of the proposal*" if the following conditions are met:

1. It is critical that any runoff associated with the house demolition, onsite wastewater system decommissioning, new construction, and the new home not be delivered overland via the steep downhill pathways (westward) to Lake Hayes. All of the current and additional runoff associated with the structures and associated impervious areas (stormwater) must be managed (infiltrated into the ground) and kept onsite.
2. Drain water from the pond during, before, and after home construction must not be delivered overland offsite.
3. The natural inland wetlands mapped on the property must be preserved, protected, and ideally enhanced with native vegetation.
4. The key opportunity to contribute to water quality improvement is changing from onsite wastewater disposal (septic system and leach field) to QLDC's reticulated wastewater sewer system. This will remove a nitrogen, phosphorus, and household waste pollutant source from the Lake Hayes catchment and would represent a marked improvement in water quality.

Our independent analysis finds that this property change with the associated stormwater controls, pond drain water controls, and switch from onsite to reticulated wastewater disposal can represent a direct positive water quality improvement for Lake Hayes and can clearly meet the Queenstown Lakes District Plan Policy 24.2.4.2 requirement to "*contribute to water quality improvement in*

the catchment commensurate with the nature, scale and location of the proposal”.

If you have any questions regarding the information provided in this letter, please contact Brian McGlynn on 03 409 8664 or via email at Brian.McGlynn@e3scientific.co.nz

Yours sincerely,



Brian McGlynn, PhD
Environmental Scientist and Hydrologist

Attachments

Attachment A: Site location maps and photographs



Attachment A: Site location maps and photographs

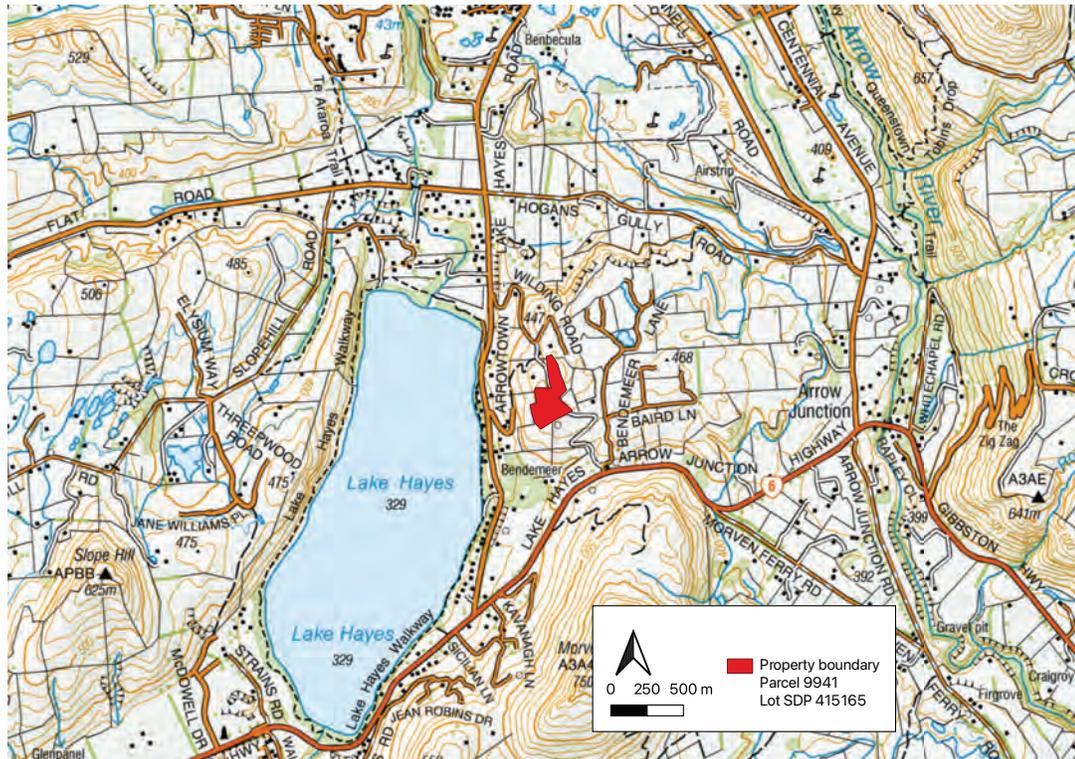


Figure 1 Location of property in the Lake Hayes catchment

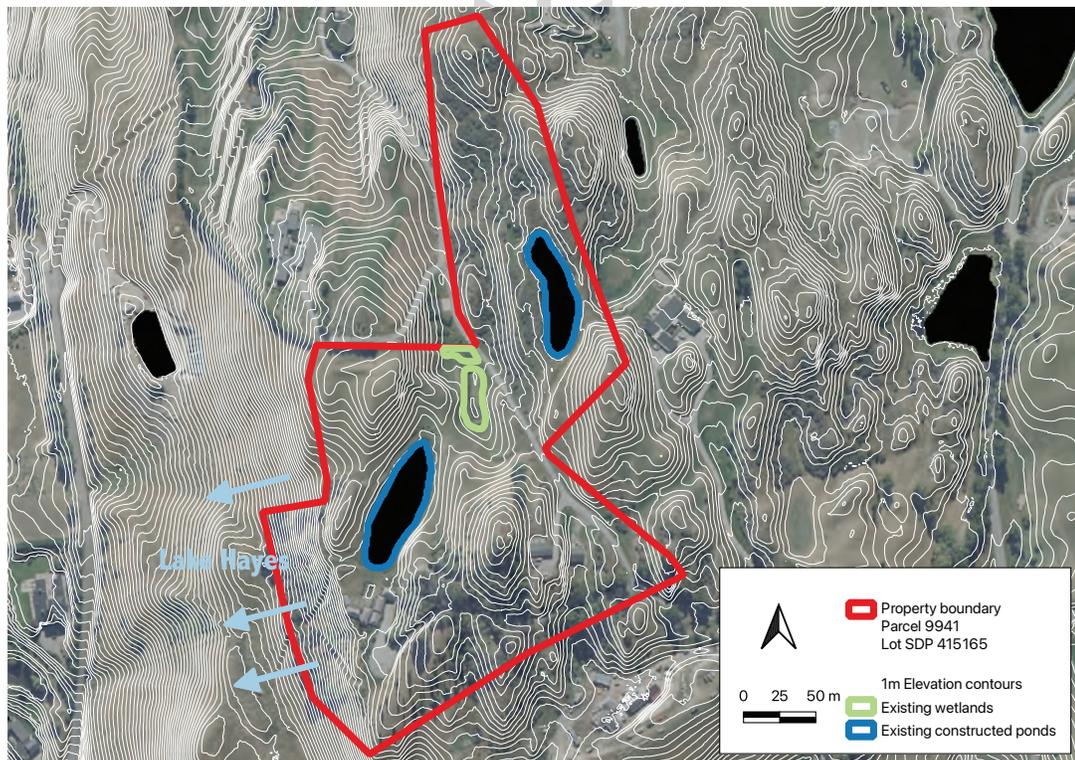


Figure 2 QLDC aerial photo, 1m elevation contours, property boundary, and existing wetlands and constructed ponds.



Figure 3 Wetland boundaries superimposed on QLDC aerial photos with 1m elevation contours

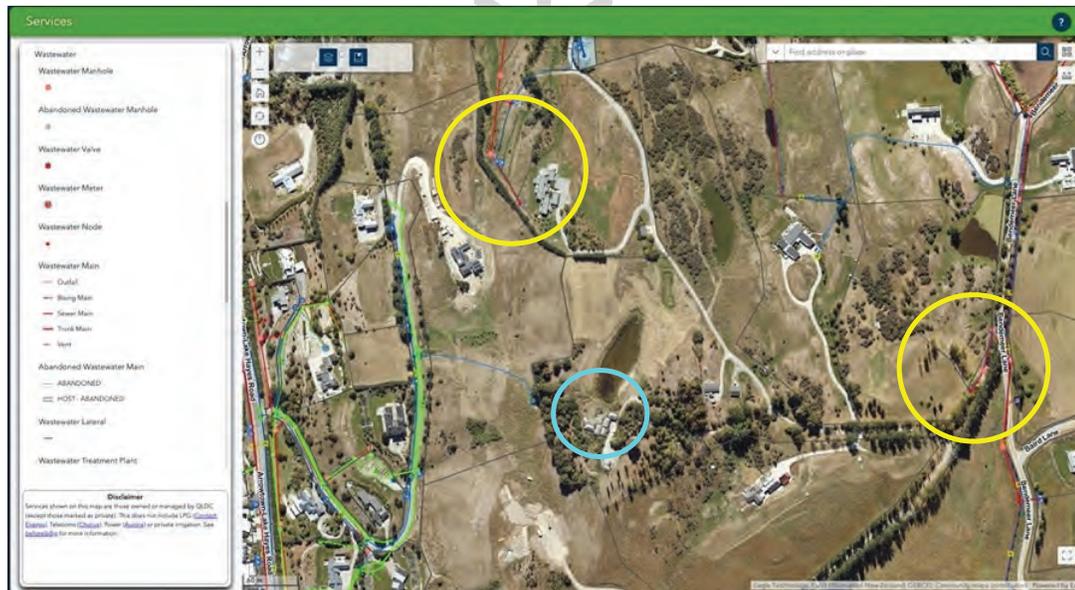


Figure 4 QLDC reticulated wastewater extends to nearby properties (yellow circles) that are relatively close to this house location (blue circle). See additional report by Chris Hansen Clark Fortune MacDonald (CFMA) for confirmation details.

Table 3 Site conditions associated with the SW constructed pond and slope to Lake Hayes

<p>Photograph is looking west-southwest with the SW pond in the foreground. The outlet/overflow to the pond is located on the left side of the photo which is the SW corner of the pond.</p>	
<p>Photograph is an irrigation water source to the west of the SW pond that is occasionally used to refill the pond in dry times.</p>	
<p>Photograph is looking south-southwest over Lake Hayes with the existing house platform behind the photographer (to the northwest). Note the slope to Lake Hayes in the foreground.</p>	

Table 4 Site conditions associated with the NE constructed pond

<p>Photograph is looking north across the NE Pond.</p>	 A landscape photograph showing a calm body of water (the NE Pond) in the middle ground. The water reflects the overcast, grey sky. In the foreground, there is a dense area of tall green grasses and some shrubs. In the background, there are rolling hills and mountains under a cloudy sky.
<p>Photograph looking NE across the berm on the west end of the NE constructed pond.</p>	 A photograph showing a dirt and grass path or berm leading towards a pond. On the left side of the path, there is a small, green, rectangular metal structure, possibly a utility box. The area is surrounded by green grass and some bushes. In the background, there are mountains under a cloudy sky.

Table 5 Site conditions associated with the wetland complex just SW of the road bisecting the property

<p>Photograph looking north across the wetlands in the foreground.</p>	 <p>A landscape photograph showing a red dirt path winding through a green, grassy field. In the background, there are rolling hills and mountains under a cloudy sky. A few trees and a small building are visible in the mid-ground.</p>
<p>Photograph looking south across the wetlands in the foreground.</p>	 <p>A landscape photograph showing a red dirt path winding through a green, grassy field. The sky is overcast with grey clouds. In the distance, mountains are visible through the haze.</p>
<p>Photograph looking north-west across the wetlands in the foreground.</p>	 <p>A landscape photograph showing a green, grassy field with a red dirt path. A large, leafy tree is prominent on the right side. The sky is overcast with grey clouds.</p>

Attachment B: Wetland field identification sheets. See corresponding locations on the wetland site map

Upland site A

NEW ZEALAND WETLAND DELINEATION DATA FORM

SECTION A – SITE INFORMATION *Upland*

Site: *Daries site A* Region: *Otago - Arrowtown* Sampling point: *see map*
 Owner: *DAVIES* Date: *16/12/2021* Land use: *None to pasture*
 Landform: Local relief: *upland area between depression* Land cover: *vegetated*
 Is the land drained (circle) YES NO Investigator(s): *Alison Taylor, Teale Selwyn* Slope: *0.5°*
 GPS (NZTM): *1270597, 5011437* Altitude m: *454* Photo No: _____

Are climatic/hydrologic conditions on the site typical for this time of year? YES NO (circle appropriate; if NO explain in Remarks)
 Are vegetation, soil or hydrology significantly disturbed? (circle) YES NO
 Are 'normal circumstances' present? (circle) YES NO
 Are vegetation, soil or hydrology naturally problematic? (circle) NO Explain answers in Remarks if needed

SUMMARY OF FINDINGS—Attach site map showing sampling point locations, transects, important features etc.

Hydrophytic vegetation present? YES NO Is the sampled area within a wetland? YES NO
 Hydric soils present? YES NO
 Wetland hydrology present? YES NO

SECTION B – VEGETATION

Use scientific names of plants	Absolute % cover	Dominant Species?	Indicator Status	Dominance Test:	
Tree Stratum (Plot size: _____)				No. Dominant Sp. OBL/FACU/FAC (A) <i>1</i>	
1. _____	_____	_____	_____	Tot. Dominant Sp. across strata (B) <i>3</i>	
2. _____	_____	_____	_____	% OBL/FACU/FAC (A/B) <i>0.333</i> = 33.5%	
3. _____	_____	_____	_____	Prevalence Index:	
4. _____	_____	_____	_____	Total % cover of:	Multiply by:
Total cover = _____				OBL <i>—</i> x1 = _____	
Sapling/Shrub Stratum (Plot size: _____)				FACU <i>—</i> x2 = _____	
1. _____	_____	_____	_____	FAC <i>36</i> x3 = <i>108</i>	
2. _____	_____	_____	_____	FACU <i>89</i> x4 = <i>356</i>	
3. _____	_____	_____	_____	LPL <i>11</i> x5 = <i>55</i>	
4. _____	_____	_____	_____	Total <i>136</i> (A) <i>519</i> (B)	
5. _____	_____	_____	_____	Prevalence Index (B/A) = <i>3.8</i>	
Total cover = _____				Hydrophytic vegetation indicators:	
Herb Stratum (Plot size: <i>2m x 2m</i>)				<input checked="" type="checkbox"/> Dominance Test is >50%	
1. <i>Sweet vernal</i> *	<i>45%</i>	<i>FACU</i>	<i>Y</i>	<input checked="" type="checkbox"/> Prevalence Index is <3.0 ¹	
2. <i>Yorkshire Fog</i> *	<i>30%</i>	<i>FAC</i>	<i>Y</i>	<input type="checkbox"/> Morphological adaptations ² (supporting data in Remarks)	
3. <i>Cocks Foot</i> *	<i>2%</i>	<i>FACU</i>		<input type="checkbox"/> Problematic hydrophytic vegetation ³	
4. <i>White clover</i> *	<i>30%</i>	<i>FACU</i>	<i>Y</i>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
5. <i>Suckling clover</i> *	<i>10%</i>	<i>LPL</i>		Hydrophytic vegetation present?	
6. <i>Thistle</i> *	<i>10%</i>	<i>FACU</i>		YES <input type="checkbox"/>	
7. <i>Doc</i> *	<i>5%</i>	<i>FAC</i>		NO <input checked="" type="checkbox"/>	
8. <i>Chickweed</i> *	<i>1%</i>	<i>FACU</i>		UNCERTAIN <input type="checkbox"/>	
9. <i>Ranunculus repens</i> *	<i>—</i>	<i>FAC</i>			
10. <i>Sheep Sorrel</i> *	<i>—</i>	<i>FACU</i>			
11. <i>Bromus</i> *	<i>—</i>	<i>LPL</i>			
12. _____	_____	_____	_____	Total cover = <i>136</i>	

Remarks: ** = introduced spp*
Alison Taylor
Darius Davies
L. Selwyn

SECTION C – SOIL AND HYDROLOGY

Profile description: (Describe to the depth needed to confirm indicator presence/absence, 30 cm default)

Depth (cm)	Matrix colour (moist)	Mottles colour (moist)	Mottles % ⁴	Mottles Size ¹	Mottle location ³	Material ²	Remarks
0-2cm							D Horizon Fine roots extending to 6-8cm
2-6cm	DRR4/4					Assumed to be high organic	A Horizon Fine roots
6-8cm							Grades into RRR & Mineral soil

¹Use % area charts; ²Use size classes; ³Red face, pore, within ped along roots, within matrix; ⁴Organic (peaty), humic, mineral soil

Hydric soil indicators:

Soil drainage (circle): W M P VP

Organic layers: Organic soil material, Litter, Fibric, Mesic, Humic, Peaty topsoil, Peaty subsoil

Concretions: Iron concretions, Manganese concretions, Nodular

Consistence: Plastic, Sticky, Fluid

Colours: profile form either: Clay Oil, Mottled

Horizon: Reductomorphic, Redox mottled, Redox segregations, Perch-gley features

Cause of wetness (circle appropriate): Location: Depression, Flat, Valley, Gully, Slope; Water table: Depth (cm) _____; High GW / Perched / Seepage / Tidal / Lentic; Pans: Depth (cm) _____; Pan: Humus / Fe-pan / Dens / Dur / Frag / Ortstein; Layers: Depth (cm) _____; Slow perm: argillic; Pugged

Hydric soils present? YES NO UNCERTAIN NZSC subgroup _____

Primary hydrology indicators: minimum of 1 required; check all boxes that apply NONE

Surface water (1A), Groundwater <30 cm (1B), Soil saturation <30 cm (1C), Water marks (2A), Sediment deposits (2B), Drift deposits (2C), Algal mat/crust (2D), Iron deposits (2E), Surface soil cracks (2F), Inundation on aerial imagery (2G), Sparsely vegetated concave surface (2H), Salt crust (2I), Aquatic invertebrates (2J), Hydrogen sulphide odour (3A), Oxidised rhosphore on roots (3B), Reduced iron (3C), Reduced iron in tilled soil (3D), High water table stunted/stressed plants (4A)

Secondary hydrology indicators: minimum of 2 required; check all boxes that apply NONE

Water-stained leaves (2K), Drainage patterns (2L), Dry-season water table (3E), Saturation in aerial imagery (3F), Geomorphic position (4B), Shallow aquitard (4C), FAC-neutral test (4D), Frost-heave hummocks (4E)

FAC-neutral test (4D): refer to Section B: Vegetation

1. No. OBI & FACW dominant species _____ (A)
 2. No. FACU & UPL dominant species _____ (B)
 3. Total _____ (A+B)
 4. FAC-neutral (>50%) _____ (A/A+B)*100

Wetland hydrology present? YES NO

Sketch of site/soil: see maps in report

Remarks:

Wetland site B

NEW ZEALAND WETLAND DELINEATION DATA FORM

SECTION A – SITE INFORMATION Wetland is Pond

Site: Davies Site B Region: Otago - Arrotown Sampling point: _____
 Owner: Davies Date: 16/12/2021 Land use: None
 Landform: _____ Local relief: depression Land cover: _____
 Is the land drained (circle) YES NO Investigator(s): AS, JF, JL Slope: 0°
 GPS (NZTM): 1270607 5011426 Altitude m: 453m Photo Nos: _____

Are climate/hydrologic conditions on the site typical for this time of year? YES NO (circle appropriate; if NO explain in Remarks)
 Are vegetation, soil or hydrology significantly disturbed? (circle) YES NO Are 'normal circumstances' present? (circle) YES NO
 Are vegetation, soil or hydrology naturally problematic? (circle) YES NO Explain answers in Remarks if needed

SUMMARY OF FINDINGS—Attach site map showing sampling point locations, transects, important features etc.

Hydrophytic vegetation present? YES NO Is the sampled area within a wetland? YES NO
 Hydric soils present? YES NO
 Wetland hydrology present? YES NO

SECTION B – VEGETATION

Use scientific names of plants.	Absolute % cover	Dominant Species?	Indicator Status	Dominance Test:
Tree Stratum (Plot size: _____)				No. Dominant Spp. OBL/FACW/FAC (A) <u>2</u>
Total cover = _____				Tot. Dominant Spp. across strata (B) <u>2</u>
Sapling/Shrub Stratum (Plot size: _____)				% OBL/FACW/FAC (A/B) <u>100%</u>
Total cover = _____				Prevalence Index:
Herb Stratum (Plot size: 2x2m)				Total % cover of: Multiply by:
1. <u>Tian offshoot</u> ^{DK}	<u>25%</u>	<u>FACW</u>	<u>Y</u>	OBL <u>20</u> x1 = <u>20</u>
2. <u>Ranunculus repens</u> *	<u>5%</u>	<u>FAC</u>	<u>Y</u>	FACW <u>25</u> x2 = <u>50</u>
3. <u>Broadleaf DOC</u> *	<u>15%</u>	<u>FAC</u>		FAC <u>60</u> x3 = <u>180</u>
4. <u>Scleranthus rigens</u> *	<u>10%</u>	<u>FACU</u>		FACU <u>10</u> x4 = <u>40</u>
5. <u>Azolla sp.</u>	<u>10%</u>	<u>OBL</u>		LRL - x5 = -
6. <u>Lemna disperma</u>	<u>10%</u>	<u>OBL</u>		Total <u>115</u> (A) <u>290</u> (B)
Total cover = <u>115%</u>				Prevalence Index (B/A) = <u>2.52</u>

Hydrophytic vegetation indicators:
 Dominance Test is >50%
 Prevalence Index is >3.0¹
 Morphological adaptations¹ (supporting data in Remarks)
 Problematic hydrophytic vegetation¹

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present?
 YES
 NO
 UNCERTAIN

Remarks:
~~Tian offshoot, Ranunculus repens, Scleranthus rigens~~
 { Azolla (OBL)
 { Duckweed (green underneath) (OBL)
 Dispersed covering pond.
 • Rotten egg smell in sections
 • * = introduced spp. Sulphidic conditions present

SECTION C – SOIL AND HYDROLOGY

Profile description: [Describe to the depth needed to confirm indicator presence/absence; 30 cm default]

Depth (cm)	Matrix colour (moist)	Mottles colour (moist)	Mottles % ¹	Mottles Size ²	Mottle location ³	Material ⁴	Remarks
0-4cm							Fibric peat
4-10cm							Mossic to humic. Below water table.

¹Use % area charts; ²Use size classes; ³Red face, pore, within ped along roots, within matrix; ⁴Organic (peat), humic, mineral soil

Hydric soil indicators:

Soil drainage (circle) W M W I P VP

Organic layers: Organic soil material, Litter, Fibric, Mossic, Humic, Sticky topsoil, Peaty subsoil

Concretions: Iron concretions, Manganese concretions, Nodular

Consistence: Plastic, Sticky, Fluid

Colour: profile form either: Gley DR, Mottled

Horizon: Reductomorphic, Redox mottled, Redox segregations, Patch-gley features

Cause of wetness (circle appropriate): Location: depression Flat Valley Gully Slope
 Water table: Depth (cm) ≤ 15cm
 High table Perched Seepage Tidal Lentic
 Pan: Depth (cm) _____
 Pan Humus Fe-pan Dens- Dur- Fragg Ortstein
 Layers: Depth (cm) _____
 Slow perm argilic
 Puiggid

Hydric soils present? YES NO UNCERTAIN NZSC subgroup _____

Primary hydrology indicators: minimum of 1 required; check all boxes that apply

Surface water (1A), Groundwater <30 cm (1B), Soil saturation <30 cm (1C), Water marks (2A), Sediment deposits (2B), Drift deposits (2C)

Algal mat/crust (2D), Iron deposits (2E), Surface soil cracks (2F), Inundation on aerial imagery (2G), Sparsely vegetated concave surface (2H), Salt crust (2I)

Aquatic invertebrates (2J), Hydrogen sulphide odour (3A), Oxidised rhizosphere on roots (3B), Reduced iron (3C), Reduced iron in tilled soil (3D), High water table stunted/stressed plants (4A)

Secondary hydrology indicators: minimum of 2 required; check all boxes that apply

Water-stained leaves (2K), Drainage patterns (2L), Dry season water table (3E), Saturation in aerial imagery (3F)

Geomorphic position (4B), Shallow aquitard (4C), FAC-neutral test (4D), Frost-heave hummocks (4E)

FAC-neutral test (4D): refer to Section 8: Vegetation
 1. No. CBL & FACW dominant species _____ (A)
 2. No. FACU & LPL dominant species _____ (B)
 3. Total _____ (A+B)
 4. FAC-neutral (>50%) _____ [(A+B)*100]

Wetland hydrology present? YES NO

Sketch of site/soil: *See maps in report*

Remarks: *Pond 7.30m depth*

low water table

Reducing odour - not sulphur

Wetland Site C

NEW ZEALAND WETLAND DELINEATION DATA FORM					
SECTION A - SITE INFORMATION					
Site: <u>Davies site C</u>	Region: <u>Otago - Araratown</u>	Sampling point: <u>See map</u>			
Owner: <u>Davies</u>	Date: <u>16/12/2021</u>	Land use: <u>None</u>			
Landform:	Local relief: <u>Local depression</u>	Land cover: <u>Vegetation</u>			
Is the land drained (circle) YES <input type="radio"/> NO <input checked="" type="radio"/>	Investigator(s): <u>Melissa, Tracy, Teke</u>	Soil °C:	Slope: <u>0-1°</u>		
GPS (NZTM) <u>127605, 5011444</u>	Altitude m: <u>453m</u>	Photo Nos:			
Are climatic/hydrologic conditions on the site typical for this time of year? YES <input checked="" type="radio"/> NO (circle appropriate; if NO explain in Remarks)					
Are vegetation, soil or hydrology significantly disturbed? (circle) NO <input checked="" type="radio"/> YES <input type="radio"/>					
Are 'normal circumstances' present? (circle) YES <input checked="" type="radio"/> NO <input type="radio"/>					
Are vegetation, soil or hydrology naturally problematic? (circle) NO <input checked="" type="radio"/> YES <input type="radio"/> Explain answers in Remarks if needed					
SUMMARY OF FINDINGS—Attach site map showing sampling point locations, transects, important features etc.					
Hydrophytic vegetation present? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		Is the sampled area within a wetland? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>			
Hydric soils present? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>					
Wetland hydrology present? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>					
SECTION B - VEGETATION					
Use scientific names of plants. Absolute Dominant Indicator					
Tree Stratum (Plot size: _____) % cover		Species		Status	
1. _____		_____		_____	
2. _____		_____		_____	
3. _____		_____		_____	
4. _____		_____		_____	
Total cover = _____					
Sapling/Shrub Stratum (Plot size: _____)					
1. _____		_____		_____	
2. _____		_____		_____	
3. _____		_____		_____	
4. _____		_____		_____	
5. _____		_____		_____	
Total cover = _____					
Herb Stratum (Plot size: _____)					
1. _____		_____		_____	
2. _____		_____		_____	
3. _____		_____		_____	
4. _____		_____		_____	
5. _____		_____		_____	
6. _____		_____		_____	
7. _____		_____		_____	
8. _____		_____		_____	
9. _____		_____		_____	
10. _____		_____		_____	
11. _____		_____		_____	
12. _____		_____		_____	
Total cover = _____					
Dominance Test: No. Dominant Spp. OBL/FACW/FAC (A) / _____ Tot. Dominant Spp. across strata (B) _____ % OBL/FACW/FAC (A/B) <u>75%</u>					
Prevalence Index: Total % cover of: Multiply by: OBL _____ x 1 = _____ FACW _____ x 2 = _____ FAC _____ x 3 = _____ FACU _____ x 4 = _____ UPL _____ x 5 = _____ Total _____ (A) _____ (B) Prevalence Index (B/A) = _____					
Hydrophytic vegetation indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is >3.0 ¹ <input type="checkbox"/> Morphological adaptations ¹ (supporting data in Remarks) <input type="checkbox"/> Problematic hydrophytic vegetation ²					
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic					
Hydrophytic vegetation present? YES <input type="checkbox"/> NO <input type="checkbox"/> UNCERTAIN <input checked="" type="checkbox"/>					
Remarks: <u>inconclusive vegetation - exotic pasture grasses, but with Eleocharis acuta or gracilis, both of which are OBL.</u>					

2nd wetland!

SECTION C – SOIL AND HYDROLOGY

Profile description: (Describe to the depth needed to confirm indicator presence/absence, 30 cm default)

Depth (cm)	Matrix colour (moist)	Mottles colour (moist)	Mottles % ¹	Mottles Size ²	Mottle location ³	Material ⁴	Remarks
0-6cm							Fibrous root
6+ cm							Organic grading to gley mineral clay + glauco.

Use % area charts; ¹Use size classes; ²Red face, pore, within ped along roots, within matrix; ³Organic (peaty), humic, mineral soil

Hydric soil indicators:

Soil drainage (circle) W MW I P VP

Organic layers:

Organic soil material
 Litter
 Fibric
 Mesic
 Humic
 Peaty topsoil
 Peaty subsoil

Concretions:

Iron concretions
 Manganese concretions
 Nodular

Consistence:

Plastic
 Sticky
 Fluid

Colours: profile form either:

Gley DR
 Mottled

Horizon:

Reddishmorphic
 Redox mottled
 Redox segregations
 Perch-gley features

Cause of wetness (circle appropriate):

Location: Depression Flat Valley Gully Slope
 Water table: Depth (cm) at surface
 High DW Perched Seepage Tidal Ubbic
 Pans: Depth (cm) _____
 Pan Humus Fe-pan Dens- Dur- Frag Ortstein
 Layers: Depth (cm) _____
 Slow perm argilic
 Fugged

Hydric soils present? YES NO UNCERTAIN NZSC subgroup _____

Primary hydrology indicators: minimum of 1 required; check all boxes that apply

Surface water (1A) Algal mat/crust (2D) Aquatic invertebrates (2I)
 Groundwater <30 cm (3B) Iron deposits (2E) Hydrogen sulphide odour (3A)
 Soil saturation <30 cm (1C) Surface soil cracks (2F) Oxidised rhizosphere on roots (3B)
 Water marks (2A) Inundation on aerial imagery (2G) Reduced iron (3C)
 Sediment deposits (2B) Sparsely vegetated concave surface (2H) Reduced iron in tilled soil (3D)
 Drift deposits (2C) Salt crust (2J) High water table stunted/stressed plants (4A)

Secondary hydrology indicators: minimum of 2 required; check all boxes that apply

Water-stained leaves (2K) Geomorphic position (4B) **FAC-neutral test (4D); refer to Section B: Vegetation**
 Drainage patterns (2L) Shallow aquitard (4C) 1. No. OBL & FACW dominant species _____ (A)
 Dry-season water table (3E) FAC-neutral test (4D) 2. No. FACU & UPL dominant species _____ (B)
 Saturation in aerial imagery (3F) Frost-heave hummocks (4E) 3. Total _____ (A+B)
 4. FAC-neutral (>50%) _____ (A/A+B)*100

Wetland hydrology present? YES NO

Sketch of site/soil: See maps in report

Remarks: Inconclusive veg -> state surface grass

From: "Morgan Shepherd" <Morgan@brownandcompany.co.nz>
Sent: Thu, 9 Jun 2022 12:43:58 +1200
To: "Ruth Mackay" <Ruth.Mackay@qldc.govt.nz>
Subject: RE: RM220104 - B & M DAVIES & T SYCAMORE - Section 92(1) Request
Attachments: C. Firefighting supply plan .pdf, D. Water easement.pdf, RM220104-RFIresponse-9Jun22.pdf, A. Attachment A1.pdf, A. Attachment A2.pdf, A. Further Information Letter - Bsxtter Design .pdf, B. Bore log.pdf

Hi Ruth,

Please find **attached** RFI response and supporting information.

Please confirm this satisfies your request.

Kind Regards,

Morgan Shepherd

Resource Management Planner

T [+64 3 409 2258](tel:+6434092258) (Queenstown)

M [+64 21 246 7597](tel:+64212467597) (Wanaka)



I work in Queenstown on Monday – Wednesday and Wanaka on Thursday & Friday.

From: Ruth Mackay <Ruth.Mackay@qldc.govt.nz>
Sent: Monday, May 23, 2022 11:43 AM
To: Morgan Shepherd <Morgan@brownandcompany.co.nz>
Subject: RM220104 - B & M DAVIES & T SYCAMORE - Section 92(1) Request

Good Morning Morgan,

Further to our correspondence last week, please see further information request below in relation to RM220104. Should you require any additional information or would like to discuss any of the matters below, please give me a call on the number contained in my email signature.

REQUEST FOR FURTHER INFORMATION

To enable a full assessment of your application and to better understand the proposal and its potential effects on the environment, further information is requested under Section 92(1) of the Resource Management Act 1991 (RMA).

Requested Information

The following additional information is requested for the reasons set out below:

LANDSCAPE

Methodology

1. Please confirm if the Assessment is consistent with the latest guidelines for landscape assessment (Te Tangi A te Manu Aotearoa New Zealand Landscape Assessment Guidelines).

Landscape Character and Visual Amenity

2. The Assessment considers landscape character and visual amenity when assessing against the statutory context of the rural general zone and LCU13. This is useful, however, it would be helpful to provide an assessment of the proposal on overall landscape character (covering associative, perceptual and physical attributes) and visual amenity (including both public and private views).
3. The assessment provides photographs taken from the northern part of the Lake Hayes Track. The central and southern parts of the Lake Hayes Track (on the western side) continue to climb in elevation, and whilst located slightly further from the site, provide a 'front-on' view of the site (refer to Image 1 below). Please provide a visual simulation of the proposal from a view from this location to assist with understanding the effects and potential visibility of the proposal. Any visual simulation provided should be consistent with NZILA Tuia Pito Ora Best Practice Guide for Visual Simulations 10.2 and should illustrate the proposed vegetation clearance / management.



Assessment Against the Rural General Zone – Visual Amenity Landscape

4. Effects on Natural and Pastoral Character – please provide an assessment against 5.4.2.2 (3) (a) points i, ii and iii, giving specific consideration to:
 - a. Visual effects on the openness of the adjacent Lake Hayes ONF and Morven Hill ONF.

- b. Effects of the proposal on the character of the Visual Amenity Landscape.
- c. An assessment on any potential effects of over-domestication of the landscape.

Assessment Against LCU13

-
- 5. Please provide an overview assessment against the characteristics of LCU13 (where relevant). Specific consideration should also be given to:
 - a. The risk of exacerbating development sprawl.
 - b. Integration of buildings with landform and planting.
 - c. An assessment against LCU13's low capability to absorb additional development.

Conclusion

-
- 6. A conclusion is listed within the contents of the Assessment, however this is not included within the report. Please confirm if this has been unintentionally omitted.

Vegetation Management

-
- 7. Please confirm if consideration has been given to the survivability of vegetation within Area A should it be maintained to a height of 0.5m below the Finished Floor Level of the proposed dwelling. Many species may struggle to survive this level of pruning.
- 8. Please confirm if the assessment has considered the proposed vegetation management plan.

ENGINEERING

Potable Water Supply

-
- 9. Potable water is provided to the subject site via an existing connection from a bore situated on a neighbouring property on the northern side of the highway near the Bendemeer intersection. Please provide confirmation by way of an easement instrument which enables potable water to be legally pumped from the bore on Lot 4 DP 453236 to the subject site.
- 10. Please also provide a water capacity assessment which confirms there is sufficient capacity within the bore to accommodate an additional residential unit (as the development will result in 3 residential units onsite.) This should include the total amount of water able to be drawn from the bore and the total amount allocated to reliant properties in the nearby vicinity.

Firefighting

- 11. The servicing report by Clark Fortune McDonald and Associates does not provide a plan as how firefighting provision will be provided to the development. Please provide a plan which demonstrates compliance with the below condition:
 - a. domestic water and firefighting storage is to be provided. A minimum of 45,000 litres shall be maintained at all times as a static firefighting reserve within a 55,000 litre combination of tanks. Alternatively, a 7,000 litre firefighting reserve is to be provided for each residential unit in association with a domestic sprinkler system installed to an approved standard. A

firefighting connection in accordance with Appendix B - SNZ PAS 4509:2008 (or superseding standard) is to be located no further than 90 metres, but no closer than 6 metres, from any proposed building on the site. Where pressure at the connection point/coupling is less than 100kPa (a suction source - see Appendix B, SNZ PAS 4509:2008 section B2), a 100mm Suction Coupling (Female) complying with NZS 4505, is to be provided. Where pressure at the connection point/coupling is greater than 100kPa (a flooded source - see Appendix B, SNZ PAS 4509:2008 section B3), a 70mm Instantaneous Coupling (Female) complying with NZS 4505, is to be provided. Flooded and suction sources must be capable of providing a flow rate of 25 litres/sec at the connection point/coupling. The reserve capacities and flow rates stipulated above are relevant only for single family residential units. In the event that the proposed residential units provide for more than single family occupation then the consent holder should consult with the Fire and Emergency New Zealand (FENZ) as larger capacities and flow rates may be required.

The FENZ connection point/coupling, tank and hardstand area must be located so that it is not compromised in the event of a fire (more than 6m from a building).

The connection point/coupling shall have a hardstand area adjacent to it (within 5m) that is suitable for parking a fire service appliance. The hardstand area shall be located in the centre of a clear working space with a minimum width of 4.5 metres. Pavements or roadways providing access to the hardstand area must have a minimum formed width as required by Council's standards for rural roads (as per Council's Land Development and Subdivision Code of Practice). The roadway shall be trafficable in all weathers and be capable of withstanding an axle load of 8.2 tonnes or have a load bearing capacity of no less than the public roadway serving the property, whichever is the lower. Access shall be maintained at all times to the hardstand area.

Underground tanks or tanks that are partially buried (provided the top of the tank is no more than 1 metre above ground) may be accessed by an opening in the top of the tank whereby couplings are not required. A hardstand area adjacent to the tank is required in order to allow a fire service appliance to park on it and access to the hardstand area must be provided as above.

The FENZ connection point/coupling/fire hydrant/tank must be located so that it is clearly visible and/or provided with appropriate signage to enable connection of a fire appliance.

Firefighting water supply may be provided by means other than the above if the written approval of the Fire and Emergency New Zealand Fire Risk Management Officer is obtained for the proposed method. The firefighting water supply tank and/or the sprinkler system shall be installed prior to the occupation of the building.

Note: Fire and Emergency New Zealand considers that often the best method to achieve compliance with SNZ PAS 4509:2008 is through the installation of a home sprinkler system in accordance with Fire Systems for Houses SNZ 4517:2010, in each new residential unit. Given that the proposed residential unit is approximately 4.5km from the nearest FENZ Fire Station the response times of the New Zealand Volunteer Fire Brigade in an emergency situation may be constrained. It is strongly encouraged that a home sprinkler system be installed in each of the new residential unit(s).

Earthworks/Right to convey Water Easement

12. It is noted that the proposed earthworks will be carried out where a right to convey water easement extends along the western side of the existing and new residential unit. Cuts between 1-2m are shown on the earthworks plan in this area which could potentially daylight this infrastructure. Please detail how this easement and existing water infrastructure will be protected during the proposed earthworks.

PLANNING

Environment Court Decision

13. At the time RM220104 was submitted, a number of provisions of Chapter 24 were subject to outstanding appeals. Since then, ENV-2019-CHC-086 has been issued which resolves a number of these appeals. I have attached a copy of the decision for convenience. This application represents a level of development above that anticipated by the zoning and in an area with a low capability to absorb additional development. In line with the recent Environment Court decision, which confirms a maximum density of "one residential unit per 80 hectares net site area", please can you provide an assessment specifically addressing the density of development proposed by this application? (Noting that this proposal seeks approval for three residential units on the 6.7 hectare site). Please also address any other relevant provisions that have been addressed in the Environment Court decision, particularly the provisional amendments to Policy 24.2.1.1 and Strategic Objective 3.2.5.8.

Responding to this request

What are your options? You may:

- a. Provide the information requested within 15 working days s92A(1)(a) of this letter **14 June 2022**, or;
- b. Tell us in writing the date you will be providing the information, if you need longer than 15 working days (section 92A(1)(b)). If you chose this option the date will need to be agreed with the writer. Or;
- c. Tell us in writing that you refuse to provide this information (section 92A(1)(c)).

What happens then?

Option 1

If you decide to provide the information under option (a) or (b) above, your application will be placed on hold until the information is received (section 88c(2)(b)). After that it will be taken off hold and the processing of the application will continue.

Option 2

If you chose option (c) above and refuse to provide the information, or;

If you agree to provide the information by an agreed date and then do not do so without obtained agreement of an alternative date with the writer, or;

You do not respond at all;

Section 95C of the RMA requires that the application must be publicly notified.

We strongly suggest that you choose options (a) and (b) above to avoid the notification of the application based on insufficient information.

Ngā mihi | with kind regards,
Ruth Mackay

Ruth Mackay | Resource Consents Planner | Planning and
Development
Queenstown Lakes District Council
DDI: +64 3 450 0304
E: ruth.mackay@qldc.govt.nz





CLIENT REVIEW


Clark Fortune McDonald & Associates
 Licensed Civilian Surveyors - Land Development - Planning Consultants
 308 Lower Shotover Road, P.O. Box 552 Queenstown
 Tel: (03)441-5044, Fax: (03)442-1066, Email: admin@cfma.co.nz
 Shop 2, Origo House, 475 Moray Place, P.O. Box 5960
 Tel: (03)470-1850, Fax: (03)470-1583, Email: admin@cfma.co.nz
 S:\OBS\13200\13200\13200.dwg, Plotter: 13.06.2022

Rev	Date	Revised Details	By

PROPOSED FIRE FIGHTING
LOT 1 DP 443715

Client	Drawn	Checked	Date	Drawn No.
DAVIES	RG	RG	02-19	13236
<small> All dimensions shown are in metres unless shown otherwise. Areas shown in red are to be removed. Areas shown in blue are to be added. Boundary information is for reference only. Copyright in this drawing is reserved. </small>	RG	RG	30-19	Sheet 01 of 01
	Designed	Designed		Scale: 1:500 @ A1 1:1000 @ A3
				Datum & Level: NZGD2000 / MSL

MEMORANDUM OF TRANSFER

OTAGO Land Registry Office

WHEREAS BENDAMEAD FARM LIMITED at Invercargill (hereinafter called "the First Transferor") is the registered proprietor of an estate in fee simple in that piece of land containing 20.6551 hectares being Lot 1 Deposited Plan 19515 and being the land contained in Certificate of Title 10C/1194 Subject to Agreement 224083, Easement Certificate 589339/1, Easement Certificate 657088/4 and Transfer 833511 (hereinafter called "the land of the First Transferor")

(hereinafter called the Transferor) being registered as proprietor of an estate set out in the schedule below subject to such interests as are therein notified.

SCHEDULE A

ESTATE:	FEE SIMPLE	LEASEHOLD	LICENCE (Delete those which do not apply)	MORTGAGE	ENCUMBRANCE
	C.T.		AREA		LOT AND D.P. NO. OR OTHER LEGAL DESCRIPTION OR DOCUMENT NO.
ENCUMBRANCES, LIENS AND INTERESTS					

Pursuant to an agreement dated / / and

In consideration of the sum of S

paid to the Transferor by

(hereinafter called the Transferee) the receipt of which sum the Transferor hereby acknowledges the Transferor hereby transfers to the Transferee all the estate and interest of the Transferor in the land described in Schedule A hereto.

The Transferee covenants with the Transferor as set out in Schedule B herein and the covenants form part of this Memorandum.

In witness whereof these presents have been executed this day of 19

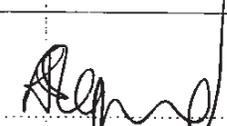
Signed by the above-named

in the presence of*

*Witness should be a Solicitor, Postmaster, J.P. or other person approved by the Registrar

I hereby certify that Part IIA of The Land Settlement Promotion and Land Acquisition Act 1952 does not apply to the within transaction.

Transfer correct for the purposes of the Land Transfer Act.


Solicitor for the Transferee

~~SCHEDULE B~~

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AND WHEREAS LAKE HAYES FARMING COMPANY LIMITED at Christchurch (hereinafter called "the Second Transferor") is the registered proprietor of an estate in fee simple in that piece of land containing 50.4553 hectares being Lot 1 Deposited Plan 23601, Lot 1 Deposited Plan 22335 and Part Lot 1 Deposited Plan 18242 and being the land contained in Certificate of Title Vol 15D-Folio ~~272~~¹⁹¹⁹ Subject to Section 241(2) 241(1) Resource Management Act 1991, 168A Coal Mines Act 1925 Agreement 224083, Easement Certificate 657088/4, Mortgage 607526 and Transfer 781788 (hereinafter called "the land of the Second Transferor").

AND WHEREAS LAKE HAYES FARMING COMPANY LIMITED at Christchurch (hereinafter called "the First Transferee") is the registered proprietor of an estate in fee simple in that piece of land containing 50.4553 hectares being Lot 1 Deposited Plan 23601, Lot 1 Deposited Plan 22335 and Part Lot 1 Deposited Plan 18242 and being the land contained in Certificate of Title Vol. 15D Folio ~~272~~¹⁹¹⁹ Subject to Section 241(2) 241(1) Resource Management Act 1991, 168A Coal Mines Act 1925 Agreement 224083, Easement Certificate 657088/4, Mortgage 607526 and Transfer 781788 (hereinafter called "the land of the First Transferee").

AND WHEREAS JOHN CHRISTOPHER BROWN of Christchurch, Solicitor and JOHN COURTNEY WESTALL WILDING of Parnassus, Farmer (hereinafter called "the Second Transferees") are registered proprietors of an estate in fee simple in that piece of land containing 4.5709 hectares being Lot 1 Deposited Plan 23298 being the land contained in Certificate of Title Vol. ~~150~~ Folio. ~~1018~~ Subject to Agreement 224083

(hereinafter called "the land of the Second Transferee")

AND WHEREAS the First Transferor and the Second Transferor are desirous of granting the respective rights and easements to and of entering into the respective covenants hereinafter set forth with the First Transferee and the Second Transferees.

NOW THEREFORE in consideration of the premises the following easements shall be granted:

1. The First Transferor grants to the First and Second Transferees the right to convey water through over and along those parts of the land of the First Transferor marked A-B on Deposited Plan 23298 to the intent that the easements so reserved shall be forever appurtenant to the land of the First and Second Transferees.
2. The Second Transferor shall grant to the Second Transferee
 - (a) The right to convey water through over and along those parts of the land of the Second Transferor marked B-C, D-E, F-G on Deposited Plan 23298 to the extent that the easements so reserved shall be forever appurtenant to the land of the Second Transferee.
 - (b) The right to convey electricity through over and along those parts of the land of the Second Transferor marked I-H-N-P on Deposited Plan 23298 to the extent that the easements so reserved shall be forever appurtenant to the land of the Second Transferee.

OUR REF: CGE8702

- (c) The right to store water on those parts of the land of the Second Transferor marked J and K on Deposited Plan 23298 to the extent that the easements so reserved shall be forever appurtenant to the land of the Second Transferee.
- (d) The right to pump water from those parts of the land of the Second Transferor marked L on Deposited Plan 23298 to the extent that the easements so reserved shall be forever appurtenant to the land of the Second Transferee.

The First and Second Transferors and the First and Second Transferees where appropriate hereby agree that the following terms and conditions shall apply to the aforesaid easements.

RIGHT TO CONVEY WATER

1. The rights and powers set out in the Seventh Schedule of the Land Transfer Act 1952 shall apply.
2. The cost of construction reconstruction maintenance upkeep repairs and renewal of any pipeline, drain or other appurtenant structure in the easement line shall be borne by the registered proprietors of the tenements using the same in the proportion with which such rights are used by each of the registered proprietors and so that no registered proprietor shall bear the cost of any such construction reconstruction maintenance and repairs as aforesaid in respect of any part of the easement line which is not used by him.
3. If any such construction reconstruction maintenance or repairs become necessary through the omission neglect or default of any one of the registered proprietors being a party to this easement then that registered proprietor shall bear the whole of the cost of such repairs or maintenance or reconstruction.
4. The Registered Proprietors will not do or suffer to be done anything which may in any way damage any drain, pipeline or other appurtenant structure thereto now in or on the easement line or which may hereafter be laid or constructed on the easement line or interfere with the free flow of water along the easement line.

RIGHT TO CONVEY ELECTRICITY

The rights and powers attached to the abovementioned easements to convey electricity shall be as follows. The full free uninterrupted and unrestricted right, liberty and privilege for the Second Transferee and his tenants (in common with the Second Transferor) his tenants and any other persons lawfully entitled to do so from time to time and at all times to convey electrical power and electrical impulses across the land over which the easement is granted or created together with the full free uninterrupted and unrestricted right, liberty and privilege for the Second Transferee and his tenants (in common with the Second Transferor) his tenants and any other person lawfully entitled to do so for the purposes as aforesaid:



- a. To use any line of pipes, electrical power, poles, supply wires, conduit pipes and mains of all descriptions already laid or any pipes, electrical power poles, supply wires, conduit pipes and mains as aforesaid in replacement or substitution for all or any of such pipes, electrical power poles, supply wires, conduit pipes and mains as aforesaid.
- b. Where no such lines of pipes, electrical power poles, supply wires, conduit pipes and mains as aforesaid exist to lay, place, maintain, construct and erect or to have laid, placed, maintained, constructed or erected such line of pipes, electrical power poles, supply wires, conduit pipes and mains as aforesaid as may be respectively required for such of the aforesaid purposes under or over the surface (as the parties decide) of the land over which the easement is granted or created and along such line if any as may be defined for such purpose or purposes.
- c. In order to construct or maintain the efficiency of such line of pipes, electrical power poles supply wires, conduit pipes and mains as aforesaid the full free uninterrupted and unrestricted right, liberty and privilege for the Second Transferee his tenants, servants, agents and workmen with any tools, implements, machinery, vehicle or equipment or whatsoever nature necessary for the purpose to enter upon the land over which the easements is granted or created and to remain there for any reasonable time for the purpose of laying, inspecting, cleaning repairing, maintaining and renewing such line of pipes, electrical power poles, supply wires, conduit pipes and mains as aforesaid or any part thereof and of opening up the soil of that land to such extent as may be necessary or reasonable in that regard subject to the condition that as little disturbance as possible is caused to the surface of the land of the Second Transferor and the surface is restored as near as possible to its original condition and any other damage done by reason of the aforesaid operations is repaired.

The cost of erecting and installing, laying, constructing, maintaining and renewing all poles, wires, cables and conduit pipes used or to be used by the registered proprietors of the land of the Second Transferor and Transferee in connection with the right to convey electric power shall be borne in proportion with which such rights are used by the Second Transferor and Transferee provided that if from any of the registered proprietor's negligence or wilful act or omission has occasioned the need for any such maintenance, repair or renewal that party shall bear the whole cost of damages, charges and expenses arising or attributable to such negligence, wilful act or omission.

RIGHT TO STORE WATER AND TO PUMP WATER

The rights and powers attached to the abovementioned easements to provide for the storing and pumping of water shall be as follows:

The full, free, uninterrupted and unrestricted right, liberty and privilege for the Second Transferee and his tenants (in common with the Second Transferor, his tenants) and any other persons lawfully entitled to do so from time to time and at all times to store water and pump water on the land over which the easement is granted or created together with the full, free, uninterrupted and unrestricted right, liberty and privilege of the Second Transferee and his



SIGNED by JOHN CHRISTOPHER
BROWN and JOHN COURTNEY
WESTALL WILDING as Second
Transferees in the presence of:

)
)
)
)



**LEGAL EXECUTIVE
WYNN WILLIAMS & CO.
SOLICITORS
CHRISTCHURCH**

OUR REF: SMA6881



EVINGTON JAMES
CO. & COMPANY
NEW YORK

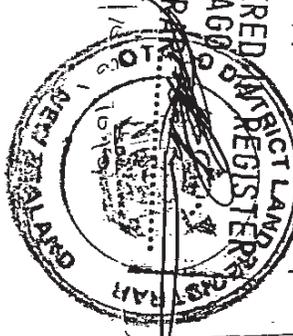
Particulars entered in the Register at the date and at the time recorded below.

District Land Registrar
Assistant of the District of

TRANSFER

Wynn Williams & Co.
SOLICITORS
Christchurch

Produced 9.17 10.MAR95
Entered 8 May 95
PARTICULARS ENTERED
LAND REGISTRY OTAGO
ASST. LAND REGISTRAR
100/1194 150/1206
877687/6



9 June 2022

Ruth Mackay
Consents Planner
Queenstown Lakes District Council

Via email: Ruth.Mackay@qldc.govt.nz

Dear Ruth

RE: RM220104 – B & M DAVIES & T SYCAMORE – REQUEST FOR FURTHER INFORMATION

The following additional information is provided in response to your formal Section 92(1) request dated 23 May 2022.

LANDSCAPE

- 1. Please confirm if the Assessment is consistent with the latest guidelines for landscape assessment (Te Tangi A te Manu Aotearoa New Zealand Landscape Assessment Guidelines).**

Please refer to **Attachment A**.

- 2. The Assessment considers landscape character and visual amenity when assessing against the statutory context of the rural general zone and LCU13. This is useful, however, it would be helpful to provide an assessment of the proposal on overall landscape character (covering associative, perceptual and physical attributes) and visual amenity (including both public and private views).**

Please refer to **Attachment A**.

- 3. The assessment provides photographs taken from the northern part of the Lake Hayes Track. The central and southern parts of the Lake Hayes Track (on the western side) continue to climb in elevation, and whilst located slightly further from the site, provide a 'front-on' view of the site (refer to Image 1 below). Please provide a visual simulation of the proposal from a view from this location to assist with understanding the effects and potential visibility of the proposal. Any visual simulation provided should be consistent with NZILA Tuia Pito Ora Best Practice Guide for Visual Simulations 10.2 and should illustrate the proposed vegetation clearance / management.**

Please refer to **Attachment A**.

- 4. Effects on Natural and Pastoral Character – please provide an assessment against 5.4.2.2 (3) (a) points i, ii and iii, giving specific consideration to:**
 - a. Visual effects on the openness of the adjacent Lake Hayes ONF and Morven Hill ONF.**
 - b. Effects of the proposal on the character of the Visual Amenity Landscape.**
 - c. An assessment on any potential effects of over-domestication of the landscape**

Please refer to **Attachment A**.

- 5. Please provide an overview assessment against the characteristics of LCU13 (where relevant). Specific consideration should also be given to:**

- a. The risk of exacerbating development sprawl.
- b. Integration of buildings with landform and planting.
- c. An assessment against LUC13's low capability to absorb additional development.

Please refer to **Attachment A**.

6. A conclusion is listed within the contents of the Assessment, however this is not included within the report. Please confirm if this has been unintentionally omitted.

Please refer to **Attachment A**.

7. Please confirm if consideration has been given to the survivability of vegetation within Area A should it be maintained to a height of 0.5m below the Finished Floor Level of the proposed dwelling. Many species may struggle to survive this level of pruning.

Please refer to **Attachment A**.

8. Please confirm if the assessment has considered the proposed vegetation management plan.

Please refer to **Attachment A**.

ENGINEERING

9. Potable water is provided to the subject site via an existing connection from a bore situated on a neighbouring property on the northern side of the highway near the Bendemeer intersection. Please provide confirmation by way of an easement instrument which enables potable water to be legally pumped from the bore on Lot 4 DP 453236 to the subject site.

The bore is located on Lot 4 DP 453236 which is contained within the same Record of Title as Lot 1 DP 443715.

10. Please also provide a water capacity assessment which confirms there is sufficient capacity within the bore to accommodate an additional residential unit (as the development will result in 3 residential units onsite). This should include the total amount of water able to be drawn from the bore and the total amount allocated to reliant properties in the nearby vicinity.

Please refer to **Attachment B** for the bore log for the water bore. It was test pumped at 1560L per hour. The bore will service three "residential units" on the subject site and a residential unit on Morven Holl (RM191216) also owned by the applicant.

Clark Fortune have provided the following water demand calculations:

2100L/day average daily demand which allows for 300L/person/day potable and 400L/person/day irrigation demand with an average occupancy of 3.

$4 \times 2100L = 8400L/day = 5.4$ hours pumping from the bore daily.

It is also noted that the subject site has a connection to the Arrow Irrigation Scheme, therefore if the irrigation demand is removed from the 3 residential unit calculation, total demand = 4800L/day or 3 hours pumping from the bore daily.

11. The servicing report by Clark Fortune McDonald and Associates does not provide a plan as how firefighting provision will be provided to the development. Please provide a plan which demonstrated compliance with the below condition:

- a. Domestic water and firefighting storage is to be provided. A minimum of 45,000 litres shall be maintained.....

Please refer to **Attachment C** for a plan showing proposed firefighting solution. This consists of two new 30,000L tanks pumped in series with existing storage tanks and includes new 100mmØ diameter main laid to 2 x new fire hydrants located adjacent existing driveway/hard stand area. The hydrants will be located no further than 90m of the fire risk and no closer than 6m.

It is also noted that there is an existing pond that contains approximately 750,000L of water and could be used as an alternative firefighting solution.

- 12. It is noted that the proposed earthworks will be carried out where a right to convey water easement extends along the western side of the existing and new residential unit. Cuts between 1-2m are shown on the earthworks plan in this area which could potentially daylight this infrastructure. Please detail how this easement and existing water infrastructure will be protected during the proposed earthworks.**

Please refer to **Attachment D** for a copy of the original water easement 877687.6 & DP 23298 showing its location and width. This pipeline conveys irrigation water from a higher level pond to properties to the west. At commencement of the earthworks the existing pipeline will be potholed and located at the extent of the proposed works. If required, and if the irrigation water is being used, a temporary pipeline will be installed around the extent of the works to ensure continuity of supply while the earthworks are completed. Once the earthworks are at subgrade, a permanent line will be placed back within the easement corridor at an appropriate depth to enable supply to continue as before.

- 13. At the time RM220104 was submitted, a number of provisions of Chapter 24 were subject to outstanding appeals. Since then, ENV-2019-CHC-086 has been issued which resolved a number of these appeals. This application represents a level of development above that anticipated by the zoning and in an area with a low capability to absorb additional development. In line with the recent Environment Court decision, which confirms a maximum density of “one residential unit per 80 hectares net site area”, please can you provide an assessment specifically addressing the density of development proposed by this application? (Noting that this proposal seeks approval for three residential units on the 6.7 hectare site). Please also address any other relevant provisions that have been addressed in the Environment Court decision, particularly the provisional amendments to Policy 24.2.1.1 and Strategic Objective 3.2.5.8.**

The proposal is for two new residential units as the total floor area of the guest house is 178m² and therefore it does not meet the definition of residential flat. Regardless, the proposed guest house will function like a residential flat in that it is ancillary to the residential unit and will be occupied by friends and family when they visit the applicants. The applicant is prepared to volunteer the following condition (or similar):

“The Guest House shall function like a Residential Flat, and is to be occupied by friends and family only in association with the Residential Activity on the site.”

Further to this, the proposed main residential unit is replacing one of the existing residential units on the site. In effect, the proposal maintains the number of residential units on the site, and the proposal is effectively replacing like for like (in respect of the total number of buildings functioning as individual residential units).

Objective 3.2.5.8 and Policy 24.2.1.1 are still provisional and our understanding is that they do not yet carry any weight for resource consent applications. Regardless, we assess them as follows:

Objective 3.2.5.8

~~*Within the Wakatipu Basin Rural Amenity Zone, adverse effects on landscape character and visual amenity values from subdivision or development are anticipated and effectively managed, through policies and rules, so that:*~~

- ~~*a. the identified the landscape character is maintained and visual amenity values are maintained or enhanced, as identified in Schedule 24.8; and*~~
- ~~*b. cumulative adverse effects are avoided the landscape capacity of the Basin and its Landscape Character Units is not exceeded.*~~

As discussed in **Attachment A**, the proposal will occupy a location of a long-established residential unit (and associated residential activity) in a minor portion of a broadly expansive landscape. It is acknowledged that the proposal will be visible from 1.3km but the level of change will be difficult to perceive because it will be generally consistent with the level of visibility of the existing dwelling. The potential effects on the visual amenity and landscape character of the eastern landscapes of Lake Hayes will be very low for the reasons discussed in **Attachment A**.

The proposal is consistent with Objective 3.2.5.8 as the proposal does not exceed the landscape capacity of the Landscape Character Unit 13 and the wider Basin.

Policy 24.2.1.1

~~Require an 80 hectare minimum site area be maintained within the Wakatipu Basin Rural Amenity Zone outside of the Precinct.~~

~~Avoid any new residential development or subdivision for residential activity outside of the Precinct that does not achieve the identified minimum site area standards unless the proposal:~~

~~a. avoids adverse cumulative effects on the identified landscape character and visual amenity values identified in Schedule 24.8; and~~

~~b. is located and designed and of a nature that will ensure landscape capacity is not exceeded.~~

~~To assist to achieve Objective 24.2.1, subdivision or residential development in all areas outside of the Precinct that are identified in Schedule 24.8 to have Very Low, Low or Moderate-Low capacity must be of a scale, nature and design that:~~

~~a. is not inconsistent with any of the policies that serve to assist to achieve that objective; and~~

~~b. ensures that the landscape character and visual amenity values identified for each relevant Landscape Character Unit in Schedule 24.8 and the landscape character of the Wakatipu Basin as a whole are maintained or enhanced.~~

The proposal is not inconsistent with the policies that assist to achieve Objective 24.2.1 (which states that *landscape character and visual amenity values in the Wakatipu Basing are maintained or enhanced*) as the landscape character and visual amenity values are maintained for the reasons set out in **Attachment A** and the Landscape Assessment that accompanied the application.

I trust this satisfies your request and allows the application to be progressed, however if you require any further clarification, please let me know.

Kind Regards,



Morgan Shepherd

Brown & Company Planning Group

Attachments:

- A. Further Information Letter from Baxter Design**
- B. Bore log**
- C. Firefighting supply plan**
- D. Water easement**



ATTACHMENT A1

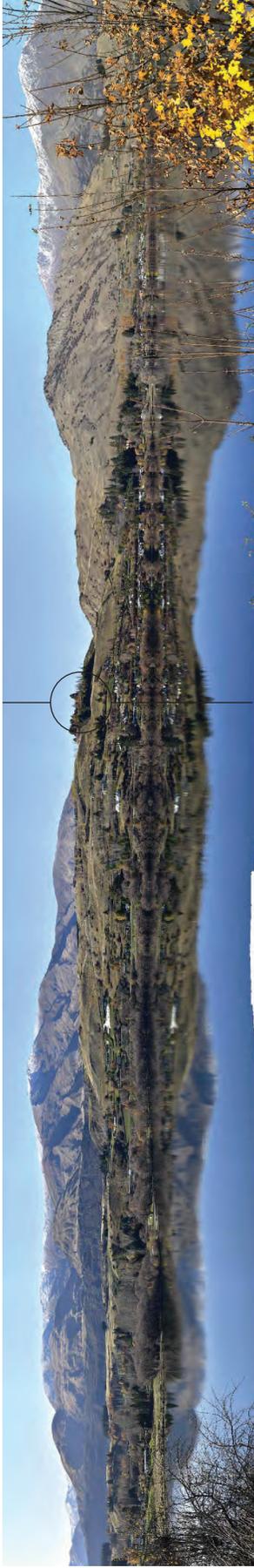
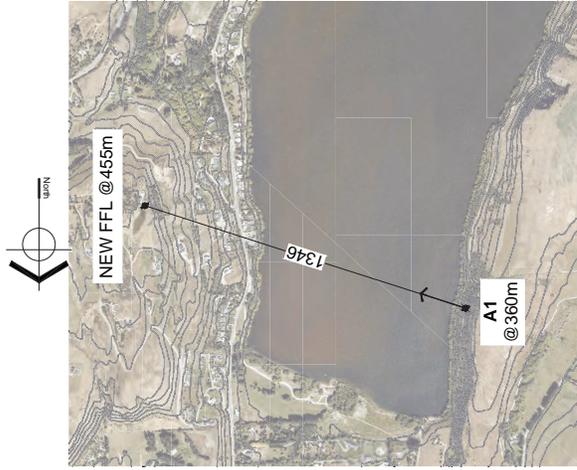


PHOTO A1 : 50mm COMPOSITE IMAGE TAKEN 26 MAY 2022 : LAKE HAYES TRACK WITH ARCHITECT'S MODEL



VIEW OF PROPOSED DWELLING



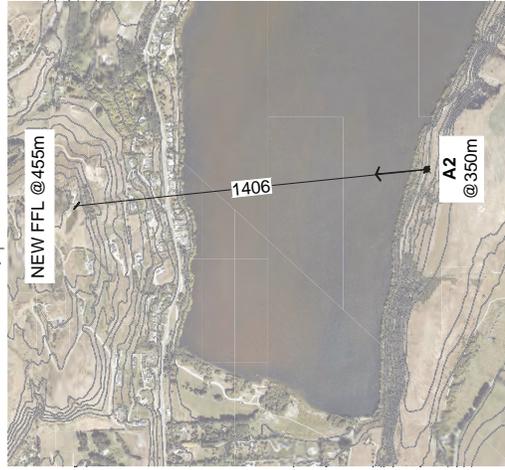
VIEW OF EXISTING DWELLING



ATTACHMENT A2



PHOTO A2 : 50mm COMPOSITE IMAGE TAKEN 26 MAY 2022 : LAKE HAYES TRACK WITH ARCHITECT'S MODEL



VIEW OF PROPOSED DWELLING



VIEW OF EXISTING DWELLING





B & M Davies & T Sycamore
Response to 92(1) request – QLDC RM 220104 – Landscape Matters
24th May 2022

BACKGROUND

1. This report responds to the landscape matters raised under a sec 92(1) request for further information and addresses the landscape matters raised in that request.
2. This report is consistent with the latest guidelines for landscape assessment (Te tangi A te Manu Aotearoa New Zealand landscape Assessment Guidelines Draft April 2021, approved 5th May).

ATTACHMENTS

3. The following are attached to this report:

Attachment A1: photograph 1 from lake Hayes track with proposed dwelling attached // computer modelled simulation

Attachment A2: photograph 2 from lake Hayes track with proposed dwelling attached / computer modelled simulation

LANDSCAPE CHARACTER AND VISUAL AMENITY

4. **Physical attributes:** *'physical' means both the natural and human derived features, and the interaction of natural and physical processes over time*¹.

The proposed dwelling will replace an established dwelling that was built in the late 1970's, with associated garden and tree plantings around that dwelling. When completed, the existing dwelling on the proposed site was the only dwelling on the escarpment face and in the upper elevations of the escarpment, and it is understood that title extended across and included the bulk of the developed escarpment that overlooks Lake Hayes and further.

5. The site is located on the upper portion of the escarpment that flanks Lake Hayes. At the base of that escarpment is the Arrowtown Lake Hayes Road, flanked on the upper and lower sides by well - established residential development. More 'recent' development (over the last 20 years) has seen that pattern of

¹ Aotearoa New Zealand Landscape Assessment Guidelines Final Draft 5th May 2022

residential development extended up from the Arrowtown Lake Hayes Road up and across the flanks of the escarpment.

6. The character of the existing residential development is defined by lot size, with smaller lots flanking the Arrowtown Lake Hayes Road and larger lots extending up across the escarpment. Associated with that pattern of development has been an expansion of tree and garden planting across a landscape which was, until relatively recently, a more open pastoral landscape.
7. The underlying landform is a gentle rolling glacially formed landscape across the escarpment, with dwellings and associated tree plantings located within the minor terrace forms that define that landform. Over time, this landscape has been transformed from a visibly open pastoral escarpment into a mixed built environment of a rural – residential character, that defines the current Lake Hayes escarpment landscape. This landscape character is transitional given that tree planting on the escarpment is till semi-mature. The change in the land use patterns and process over time on the escarpment can be seen in the images below.



Aerial photo 2001 (site circled in red) – source Precision Aerial Photography



Aerial photo 2021 (site circled in red) – source Google Earth 2022

8. **Associative attributes:** *'means the intangible things that influence how places are perceived, such as history, identity, customs, laws, narratives, creation stories and activities associated with a landscape².*

The existing dwelling and site, and its wider landscape surrounding landscape, is part of the rural residential character that has grown around Lake Hayes to take advantage of views over the lake and further to the enclosing mountains beyond that enclose the Whakatipu Basin. The Lake Hayes 'catchment (visually and physically) has a strong sense of identity and place, mostly deriving from the lake as the centrepiece with a contrast between the rural residential landscape that occupies the eastern side of the lake and the undeveloped and more natural' western edges of the lake.

9. **Perceptual attributes:** *'means both sensory experience and interpretation.... What we know, remember and imagine influences how we perceive a place'.³*

The eastern flanks of Lake Hayes are recognised as a landscape defined by a continuous established mixed residential neighbourhood, flanking the lake. Access to the lake fringes is well defined with the walkway / cycleway that circles the lake. There are several locations where the lake can be accessed by vehicle, including the northern reserve and the lake Hayes Pavillion. These are well used public amenities and the existing residential patterns on the east side of Lake Hayes are highly visible, established and part of that experience. The site of the proposed dwelling occupies a location which contains an established dwelling and trees and has formed part of the memories and place influences of Lake Hayes for 40 years.

10. The lake is a popular destination for sailing, rowing and swimming, particularly in summer months and is one of the iconic gateway landscape features of the Whakatipu Basin.

² Aotearoa New Zealand Landscape Assessment Guidelines Final Draft 5th May 2022

³ Aotearoa New Zealand Landscape Assessment Guidelines Final Draft 5th May 2022

VISUAL AMENITY + LANDSCAPE CHARACTER

11. **Public Views:** As noted in the original assessment (Baxter Design Jan 2022): *'The potential visual catchment of the proposed dwelling is relatively limited with the closest views towards the site being that directly across Lake Hayes at 1.35 km. The dwelling will not be visible from any of Arrowtown – Lake Hayes Road and all potential visibility is restricted to the Lake Hayes walkway and to the Ladies Mile corridor, those views being between 3-5km distant from the site.'*
12. To confirm, the site is not visible from SH6 north of the intersection of SH6 and Arrowtown lake Hayes Road. Along that section of SH6 that abuts the lake Hayes showgrounds and pavillion the site is mostly obscured by established foreground vegetation as it is along the north end of Lake Hayes from SH6. Any views towards the site from these locations are minor fleeting glimpse views at distances at 1.8 – 2km, over a mosaic of well-established residential area.
13. To clarify, the above refers to public views from public roads, aside from the track. Additional photographs are appended to this report in **Attachments A1 – A2** to show views towards the site from the Lake Hayes walkway on the west side of Lake Hayes, looking east towards the proposed dwelling. The **Attachments** show two views, one with the proposed dwelling modelled as a simulation and one without. The simulations have been undertaken with architectural models supplied (Paterson Architects) then located correctly with elevation and distance scaling, complying with the NZILA Best practice Guide for Visual Simulations.
14. The following is noted:
 - The proposed dwelling is a large dwelling in regards to floor area however, for the purpose of assessing effects, the western elevations only are taken into account, being the only visible edges from wider views.
 - The scale of the dwelling can only be perceived from above (where no views, either public or private, exist) and all potentially visibility of the dwelling is from lower elevations.
 - From any given viewpoint approximately 48 elevational metres of the dwelling will be visible.
 - The consented building platform on the underlying title allows a dwelling here, a complying dwelling having approximately 35 metres of visible edge from the views described, with a higher roof line, potentially up to 6.5m in height.
 - The proposed dwelling (described in the original assessment) is 3.7m in height.
 - From the Lake Hayes walkway view 3 other dwellings are visible along the top of the escarpment. These dwellings are at a higher elevation (not below the ridge as this dwelling is) and do not have the visual benefit of surrounding established tree planting established, as does the proposed dwelling. By way of comparison, the dwelling visible the north of the proposed dwelling, at a slightly higher elevation, has the same visible elevational length as the proposed dwelling however is up to 6 metres in height. That dwelling is located on the top of the escarpment
15. The proposed dwelling will occupy a location of a long-established dwelling. That location occupies a minor portion of a broadly expansive landscape and a dwelling at that location, with the tree planting, has been an established part of that landscape for 40 years. Since the original building on the site was completed, residential development has spread across the bulk of that visible escarpment and has changed the recognisable landscape character of the east side of Lake Hayes to one of a semi-rural residential landscape. The proposed dwelling will be visible; however, all views are all from distance, the closest being those views across Lake Hayes at approximately 1.3km and at that distance the proposed dwelling will be visible, albeit difficult to perceive.

16. The same applies to private views. The proposed dwelling cannot be seen from dwellings along Lake Hayes Road, from dwellings adjoining the lake and from dwellings to the north, those views being screened by landform and established development. The proposed dwelling will be potentially visible from dwellings at the south and north ends of lake Hayes however the potential adverse effects on private views are mitigated by the matters described above in regards to public views, being largely the viewing distance, the context, minimal visibility and the history of this site.
17. Taking the above into account, the potential effects on the visual amenity and landscape character of the eastern landscapes of lake Hayes arising from the proposed dwelling will be very low.
18. The remaining matters raised in the RFI are addressed below:
19. Assessment Against the Rural General Zone – Visual Amenity Landscape

Effects on Natural and Pastoral Character – please provide an assessment against 5.4.2.2 (3) (a) points i, ii and iii, giving specific consideration to:

- a. *Visual effects on the openness of the adjacent Lake Hayes ONF and Morven Hill ONF*

Not applicable given existing established dwelling and separation from the ONF / ONL.

- b. *Effects of the proposal on the character of the Visual Amenity Landscape.*

Discussed above

- c. *An assessment on any potential effects of over-domestication of the landscape.*

An established dwelling with established tree plantings and consented building platform already exists on the site. There is no additional dwelling proposed on this site as the proposed dwelling replaces an established dwelling.

20. Assessment Against LCU13

Please provide an overview assessment against the characteristics of LCU13 (where relevant). Specific consideration should also be given to:

- d. *The risk of exacerbating development sprawl.*

The proposed dwelling replaces an existing dwelling well established on site. The proposed dwelling is to be located within an established framework of tree plantings that surround the dwelling and provide an established framework of vegetation. The Attachments A1 and A2 show the location of the proposed dwelling within that framework, located largely on an existing building platform. The portion of the proposed dwelling to be located outside the RBP will be barely perceivable from the views described in this report, and in the original assessment. To that end the proposed development will not constitute development sprawl.

e. Integration of buildings with landform and planting.

The proposed dwelling is to be located at the same locale as the existing dwelling, utilising a natural terrace form in the locale of the existing dwelling. Some earthworks will be required to the immediate east of the dwelling however those earthworks will not be visible from the wider views. Any effects arising from the proposed earthworks will be of a temporary nature only and will not be discernible from wider views.

l -An assessment against LUC13's low capability to absorb additional development.

The proposed development does not constitute additional development as the proposed dwelling replaces an existing dwelling

CONCLUSION

21. The proposed development is a new dwelling replacing an existing dwelling. It is acknowledged that the proposed dwelling occupies a larger footprint than the existing dwelling, however this application is unique from a landscape perspective given that (a) the proposed dwelling is lower than the existing dwelling (b), the visible western elevation of the proposed dwelling is of a similar scale to the existing dwelling, (c) the existing dwelling is to be located within a recognisable and established framework of mature existing tree planting and (d) all views towards the site are from distances more than 1.3km, most from further
22. Taking the above into account the proposed development will have a very low adverse effect on the existing landscape character and rural amenity of the eastern Lake Hayes escarpment landscape.

Vegetation Management

Please confirm if consideration has been given to the survivability of vegetation within Area A should it be maintained to a height of 0.5m below the Finished Floor Level of the proposed dwelling. Many species may struggle to survive this level of pruning.

The existing tree planting in the foreground (west) of the dwelling was, until recently (5-6 years ago), trimmed regularly to enable views to the west. The existing tree species will survive trimming. It is noted that, in the Attachments A1 and A2, those photographs were taken in Autumn after leaf fall and, to that end, the views of the dwelling are reasonably open and reflect a trimmed tree view as per the management plan.

Please confirm if the assessment has considered the proposed vegetation management plan.

The original assessment and this report have considered the vegetation management plan and the potential effects of trimming in areas set out in that plan.

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MCNEILL DRILLING CO. LTD

WATER BORE/WELL SUMMARY FORM

CLIENTS NAME: Peter Wilding	RESOURCE CONSENT NO:
FULL ADDRESS: Lake Hayes	BORE SIZE: 150
RAPID NO:	START DATE: 21.11.00
GRID REFERENCE:	FINISH DATE: 22.11.00
DRILLER: Rolly Harrex	
MEASURED FROM: Ground Level	MACHINE: UDR600
TOTAL DEPTH BORE: 9.63	DRILL METHOD: Tubex 140
TOP LEADER: 5.93	
STATIC WATER LEVEL: 0.73	
SCREEN: SLOT: 2.5mm	LENGTH: 1m
TYPE: Stainless Steel	SIZE: 138mm
PVC SLOTTED: TOP:	BASE:
SCREEN/LEADER/SUMP: 3.70	SUMP SIZE: 125mm
TOTAL CASING USED: 6.00	
AIRLIFTED/PUMPED AT: 1560 litres per hour	
TEST PUMP PERIOD:	
DRAWDOWN FROM SWL: 3.4	
AIR/PUMP INTAKE:	
BACTERIAL WATER TEST:	
CHEMICAL WATER TEST:	
EXTRA NOTES:	
BORE LOG:	
0.00 - 0.80	Top soil
0.80 - 3.80	Sandy brown gravels
3.80 - 6.80	Silty blue schist gravels
6.80 - 9.90	Schist rock

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Invercargill

CITY COUNCIL

CITY OF WATER AND LIGHT

WATER TESTING LABORATORY

Lake Street Invercargill
 ph(03) 216 2189 fax (03) 216 2789

27-Nov-00

Lab Reference Number B 3538

McNeill Drilling Water Test Report: Alexandra

Name: Wilding P
Address:
Order No: 16380
Date Received: 23/11/2000 12:30
Date Sampled: 22/11/2000 14:00
Sample Description: Water

BACTERIOLOGICAL

Total Coliform: Colony Forming Units per 100ml 0
Faecal Coliform: Colony Forming Units per 100ml 0
Enterococci: Colony Forming Units per 100ml 0

PHYSICAL

pH: 6.74
pH after Aeration: 8.62
Turbidity: NTU 14.84
Total Hardness: mg per litre as CaCO₃ 275
Calcium Hardness: mg per litre as CaCO₃ 250
Magnesium Hardness: mg per litre as CaCO₃ 25

CHEMICAL

Iron: mg per litre 0.30
Nitrate: mg per litre as N 0.09
Ammonia: mg per litre as N 0.03
Chloride: mg per litre 6
Manganese: mg per litre 0.01

Bacteriologically this water sample showed no sign of contamination. A hard water sample that was corrosive.

P. A. Rodmell
 City Chemist

Works and Services Directorate

Civic Administration Building • 101 Esk Street • Private Bag 90104 • Invercargill 9520 • New Zealand

DX No. YA90023 • Telephone: (03) 218 1959 • Fax: (03) 214 3684



From: "Morgan Shepherd" <Morgan@brownandcompany.co.nz>
Sent: Wed, 29 Jun 2022 15:01:16 +1200
To: "Mike Pridham" <michael.pridham@qldc.govt.nz>
Cc: "Chris Hansen" <chansen@cfma.co.nz>; "Ruth Mackay" <Ruth.Mackay@qldc.govt.nz>
Subject: RE: RM220104 - B & M DAVIES & T SYCAMORE - Section 92(1) Request

It is not subject to this application – it will remain as is.

From: Mike Pridham <michael.pridham@qldc.govt.nz>
Sent: Wednesday, 29 June 2022 3:00 pm
To: Morgan Shepherd <Morgan@brownandcompany.co.nz>
Cc: Chris Hansen <chansen@cfma.co.nz>; Ruth Mackay <Ruth.Mackay@qldc.govt.nz>
Subject: RE: RM220104 - B & M DAVIES & T SYCAMORE - Section 92(1) Request

Thanks Morgan, and what about the existing cottage?

Mike Pridham | - Land Development Engineer
Resource Management Engineering, Subdivision and Development
Contributions
Queenstown Lakes District Council
DD: +64 3 441 3656 | P: +64 3 441 0499 michael.pridham@qldc.govt.nz



From: Morgan Shepherd <Morgan@brownandcompany.co.nz>
Sent: Wednesday, 29 June 2022 2:36 PM
To: Mike Pridham <michael.pridham@qldc.govt.nz>
Cc: Chris Hansen <chansen@cfma.co.nz>; Ruth Mackay <Ruth.Mackay@qldc.govt.nz>
Subject: RE: RM220104 - B & M DAVIES & T SYCAMORE - Section 92(1) Request

Hi Mike,

Thanks for your email.

The guest house is technically a 'residential unit' under the District Plan because it exceeds 150m² (178m²), however we have volunteered the following consent notice condition as the guest house will function like a residential flat in that it is ancillary to the residential unit and will be occupied by friends and family when they come to visit the applicants:

"The Guest House shall function like a Residential Flat, and is to be occupied by friends and family only in association with the Residential Activity on the site."

Kind Regards,
Morgan Shepherd

Resource Management Planner

T [+64 3 409 2258](tel:+6434092258) (Queenstown)

M [+64 21 246 7597](tel:+64212467597) (Wanaka)



I work in Queenstown Monday – Wednesday and Wanaka Thursday and Friday

From: Mike Pridham <michael.pridham@qldc.govt.nz>
Sent: Wednesday, 29 June 2022 2:29 pm
To: Morgan Shepherd <Morgan@brownandcompany.co.nz>
Cc: Chris Hansen <chansen@cfma.co.nz>; Ruth Mackay <Ruth.Mackay@qldc.govt.nz>
Subject: FW: RM220104 - B & M DAVIES & T SYCAMORE - Section 92(1) Request

Hi Morgan,

Just got off the phone to Chris, can you please confirm the District Plan definitions for the detached 2 bedroom 'guest house' and the 1 bed flat (cottage). Are these buildings classified as Flats or separate residential units?

Regards

Mike Pridham | - Land Development Engineer
Resource Management Engineering, Subdivision and Development
Contributions
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DD: +64 3 441 3656 | P: +64 3 441 0499 michael.pridham@qldc.govt.nz



From: Chris Hansen <chansen@cfma.co.nz>
Sent: Tuesday, 28 June 2022 3:27 PM
To: Mike Pridham <michael.pridham@qldc.govt.nz>
Subject: RE: RM220104 - B & M DAVIES & T SYCAMORE - Section 92(1) Request

Hi Mike,

The site has an existing 3 bedroom residential dwelling (to be demolished) and a 1 bed residential flat (cottage), located to the east to be retained. Total 4 bedrooms.

The new replacement 3 bedroom dwelling however has a detached 2 bedroom 'guest house'. The 1 bed flat (cottage) remains unaltered.

The proposal therefore sees an increase in bedrooms on site from 4 to 6 so occupancy is higher when guests are present.

i.e. the increase in demand from existing to proposed is the addition of the guest house.

Does this answer the question?



Chris Hansen

From: Mike Pridham <michael.pridham@qldc.govt.nz>
Sent: Tuesday, 28 June 2022 2:10 p.m.
To: Chris Hansen <chansen@cfma.co.nz>
Subject: RE: RM220104 - B & M DAVIES & T SYCAMORE - Section 92(1) Request

Thanks Chris, helpful information

If you wouldn't mind, could you please confirm how many houses the bore currently accommodates?

My understanding is the upon approval of the consent, one additional water supply allocation will be needed for the additional house. Am I correct?

Regards

Mike Pridham | - Land Development Engineer
Resource Management Engineering, Subdivision and Development Contributions
Queenstown Lakes District Council
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From: Chris Hansen <chansen@cfma.co.nz>
Sent: Tuesday, 28 June 2022 11:39 AM
To: Mike Pridham <michael.pridham@qldc.govt.nz>
Subject: FW: RM220104 - B & M DAVIES & T SYCAMORE - Section 92(1) Request

Hi Mike,

Sorry, seem to be playing phone tag!

Attached is a couple of photos of the bore, both outside and inside. Also attached is the bore log.

You'll see the inside photo shows two pumps (and associated pressure vessels).

One pump services the subject site (hatched yellow), the other provides water to the house at 886 Lake Hayes-Arrow Junction Road (hatched pink).

The applicant also owns the property hatched blue and water can be pumped to the top of this site (to existing tanks) to a 2 bed house consented by RM191216.

Attached is the property Title. The bore is located in Easement E.

The title has 4 memorials referencing this area.

1st is a Right of Way, 2nd is for telecoms, 3rd is for power.

The final memorial is the easement for water for 886 Lake Hayes Road.

No other easements described over this area.

Identifier **585478**

Subject to a right of way over part Lot 1 DP 443715 marked AB, AC, AA, AAA, AAB, PA and PB on DP 442848 created by Easement Instrument 7326314.7 - 18.4.2007 at 9:00 am

The easements created by Easement Instrument 7326314.7 are subject to Section 243 (a) Resource Management Act 1991 Appurtenant to part Lot 1 DP 443715 formerly Lot 1 DP 442848 is a right to convey water created by Easement Instrument 7326314.8 - 18.4.2007 at 9:00 am

The easements created by Easement Instrument 7326314.8 are subject to Section 243 (a) Resource Management Act 1991 Appurtenant to Lot 4 DP 453236 herein is a right of way and right to drain water created by Easement Instrument 7858813.1 - 26.6.2008 at 9:00 am

Subject to a right of way over part Lot 4 DP 453236 marked AI, AA, AB, AC, AD, AE, AF, AG, AH and E on DP 453236 created by Easement Instrument 7919600.5 - 27.8.2008 at 9:00 am

The easements created by Easement Instrument 7919600.5 are subject to Section 243 (a) Resource Management Act 1991 Land Covenant in Easement Instrument 8055185.2 - 27.1.2009 at 9:00 am (affects Lot 4 DP 453236)

Subject to a right to convey water over part Lot 1 DP 443715 marked JI, ZA, AB & ZC and a right to store water over part Lot 1 DP 453236 marked ZB all on DP 443715 created by Easement Instrument 8075020.4 - 13.2.2009 at 3:07 pm

Land Covenant in Easement Instrument 8854807.10 - 5.10.2011 at 11:36 am (Affects Lot 1 DP 443715)

Land Covenant in Easement Instrument 8854807.11 - 5.10.2011 at 11:36 am (Affects Lot 1 DP 443715)

Land Covenant in Easement Instrument 8854807.12 - 5.10.2011 at 11:36 am (Affects Lot 1 DP 443715)

Subject to Section 241(2) Resource Management Act 1991 (affects DP 453236)

Land Covenant in Easement Instrument 9211218.15 - 4.12.2012 at 3:57 pm (Affects Lot 1 DP 443715)

Land Covenant in Easement Instrument 9211218.16 - 4.12.2012 at 3:57 pm (Affects Lot 1 DP 443715)

Land Covenant in Easement Instrument 9211218.17 - 4.12.2012 at 3:57 pm (Affects Lot 1 DP 443715)

Land Covenant in Easement Instrument 9211218.18 - 4.12.2012 at 3:57 pm (Affects Lot 1 DP 443715)

Subject to a right of way over part Lot 4 DP 453236 marked AA, AB, AC and AH and a right to convey water over part Lot 4 DP 453236 marked AD, AE and AH all on DP 453236 created by Easement Instrument 9211218.20 - 4.12.2012 at 3:57 pm

The easements created by Easement Instrument 9211218.20 are subject to Section 243 (a) Resource Management Act 1991 Subject to a right to store water over part Lot 1 DP 443715 marked ZH, a right to convey water over part Lot 1 DP 443715 marked ZG and W and a right to convey electricity over part Lot 1 DP 443715 marked P and W all on DP 453236 created by Easement Instrument 9211218.26 - 4.12.2012 at 3:57 pm

The easements created by Easement Instrument 9211218.26 are subject to Section 243 (a) Resource Management Act 1991 9753683.1 Encumbrance to Anthony Craig Paterson, Susan Mary Paterson, Helen Christine Wilding, David Douglas Duncan, Jane Coventry Duncan, Justin John Abbiss, Caroline Elizabeth Abbiss, Veritas (2011) Limited, Daniel Robert Foggo, Rebecca Richwhite and Veritas (2012) Limited - 26.6.2014 at 9:56 am

Subject to a right to convey electricity and water, a right to draw, store and pump water over Lot 4 DP 453236 marked E on DP 511902 created by Easement Instrument 10865395.3 - 4.8.2017 at 2:30 pm

Subject to a right to convey irrigation water over part Lot 1 marked A, on DP 529769 and over part Lot 1 marked ZA, ZB, AB and ZC on DP 443715 and a right to store water over part marked ZB on DP 443715 created by Easement Instrument 11259005.1 - 22.11.2018 at 4:55 pm

Subject to a right to convey water over part Lot 1 marked QA and QB and a right to store water over part Lot 1 marked ZB on DP 443715 created by Easement Instrument 11259005.2 - 22.11.2018 at 4:55 pm

Bore was test pumped at 1560 litres per hour.

Demand:

886 Lake Hayes Road – 2,500 Litres per day – as per easement agreement.

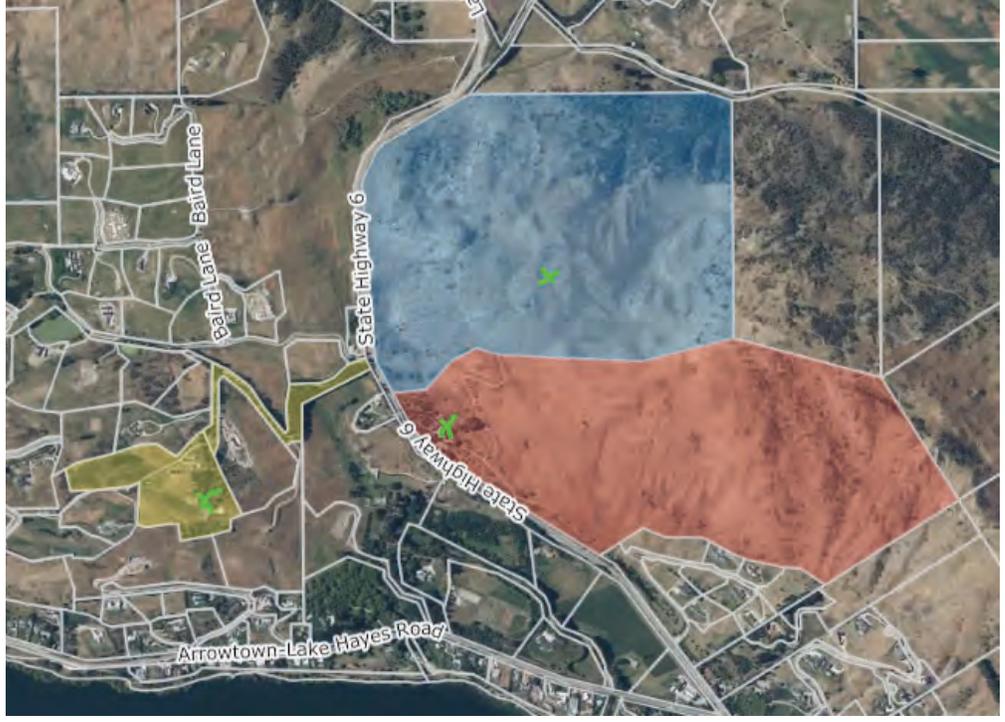
Proposed 2 bed house consented by RM191216 – say 2,100 l/day

Application – 1 house, 1 flat say 6 people occupancy = say 4,200 l/day

Total demand = 8,800 l/day or less than 6 hours pumping per day. Includes irrigation allowance.

Less than 10,000l/day for domestic so no requirement for ORC consent to take water.

Is this the info you need?



Regards,

Chris Hansen

From: Morgan Shepherd <Morgan@brownandcompany.co.nz>
Sent: Tuesday, 21 June 2022 4:59 p.m.
To: Chris Hansen <chansen@cfma.co.nz>
Cc: Shane Muir <shane.muir@trojanholdings.co.nz>
Subject: RE: RM220104 - B & M DAVIES & T SYCAMORE - Section 92(1) Request

Hi Chris – can you please call Mike Pridham to discuss item 10 further – 03 441 3656. He is in the office all day tomorrow.

Kind Regards,

Morgan Shepherd

Resource Management Planner

T +64 3 409 2258 (Queenstown)
M +64 21 246 7597 (Wanaka)



I work in Queenstown on Monday – Wednesday and Wanaka on Thursday & Friday.

From: Chris Hansen <chansen@cfma.co.nz>
Sent: Monday, June 20, 2022 1:53 PM
To: Morgan Shepherd <Morgan@brownandcompany.co.nz>
Cc: Shane Muir <shane.muir@trojanholdings.co.nz>
Subject: RE: RM220104 - B & M DAVIES & T SYCAMORE - Section 92(1) Request

Hi Morgan,

Comments below.

Regards,

Chris Hansen

From: Morgan Shepherd <Morgan@brownandcompany.co.nz>
Sent: Monday, 20 June 2022 10:15 a.m.
To: Chris Hansen <chansen@cfma.co.nz>
Cc: Shane Muir <shane.muir@trojanholdings.co.nz>
Subject: FW: RM220104 - B & M DAVIES & T SYCAMORE - Section 92(1) Request

Hi Chris – see the below request, can you please address these matters and come back to me?

Kind Regards,
Morgan Shepherd
Resource Management Planner

T +64 3 409 2258 (Queenstown)
M +64 21 246 7597 (Wanaka)



I work in Queenstown on Monday – Wednesday and Wanaka on Thursday & Friday.

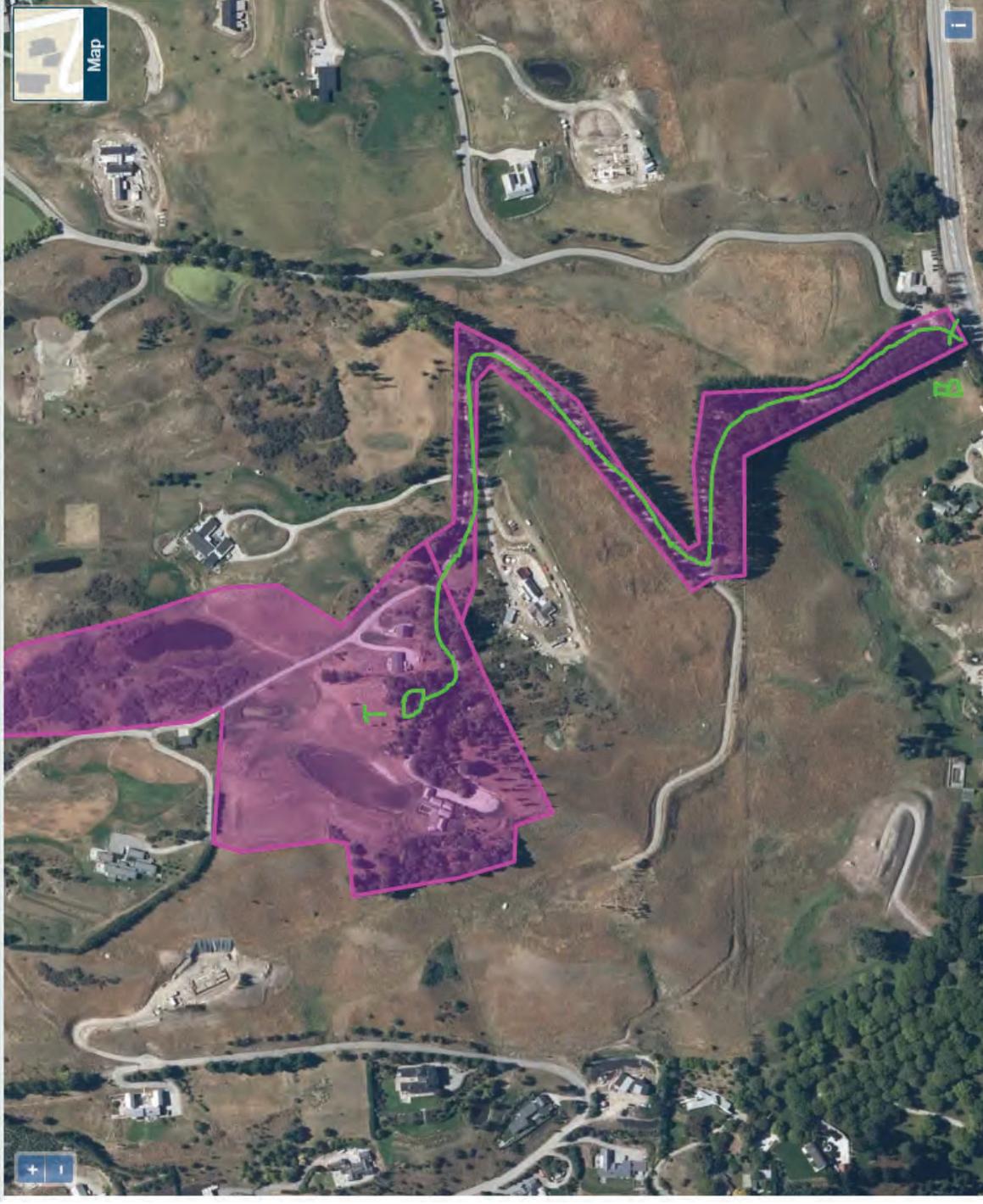
From: Ruth Mackay <Ruth.Mackay@qldc.govt.nz>
Sent: Monday, June 20, 2022 9:25 AM
To: Morgan Shepherd <Morgan@brownandcompany.co.nz>
Subject: RE: RM220104 - B & M DAVIES & T SYCAMORE - Section 92(1) Request

Hi Morgan,

As discussed, the Development Engineer has reviewed the RFI response and seeks the following clarifications:

- *Item 9: The relevant easement is not clearly identified on the easement plan supplied. Please highlight the relevant easement which enables potable water to be conveyed to the subject site (Lot 1 DP 443715) on the Water Easement attachment (Appendix D) or Record of Title documents, so that this can be clearly located / identified.*

No easement is required. The Bore is on the applicants land. They do not need an easement in favour of themselves. I've scribbled below the route of the pipe from 'B'ore to 'T'ank. The pink hatched land is the subject site.



- Item 10: For clarity, please confirm how many existing properties the bore currently accommodates. 3 in total. The bore can supply the subject site, Lot 1 DP300539 (also owned by the applicant) and Lot 13 DP310101 (886 Lake Hayes-Arrow Junction Highway) has an allocation of 2,500 litres per day (refer easement 10863393.3 attached).

For the purposes of clarity, all other RFI matters have been satisfactorily addressed.

I will only be available this morning and will then be off on extended leave. If the remaining elements of the RFI response are to be submitted during the time I am away, please can you ensure that this is issued directly to the Development Engineer – Mike Pridham (michael.pridham@qldc.govt.nz). Please also keep me in copy to any response issued.

This will allow Mike to continue his engineering assessment.

Ngā mihi | with kind regards,
Ruth Mackay

Ruth Mackay | Resource Consents Planner | Planning and Development
Queenstown Lakes District Council
DDI: +64 3 450 0304
E: ruth.mackay@qldc.govt.nz



From: Morgan Shepherd <Morgan@brownandcompany.co.nz>
Sent: Thursday, 9 June 2022 12:44 PM
To: Ruth Mackay <Ruth.Mackay@qldc.govt.nz>
Subject: RE: RM220104 - B & M DAVIES & T SYCAMORE - Section 92(1) Request

Hi Ruth,

Please find **attached** RFI response and supporting information.

Please confirm this satisfies your request.

Kind Regards,
Morgan Shepherd
Resource Management Planner

T +64 3 409 2258 (Queenstown)
M +64 21 246 7597 (Wanaka)



I work in Queenstown on Monday – Wednesday and Wanaka on Thursday & Friday.

From: Ruth Mackay <Ruth.Mackay@qldc.govt.nz>
Sent: Monday, May 23, 2022 11:43 AM
To: Morgan Shepherd <Morgan@brownandcompany.co.nz>
Subject: RM220104 - B & M DAVIES & T SYCAMORE - Section 92(1) Request

Good Morning Morgan,

Further to our correspondence last week, please see further information request below in relation to RM220104. Should you require any additional information or would like to discuss any of the matters below, please give me a call on the number contained in my email signature.

REQUEST FOR FURTHER INFORMATION

To enable a full assessment of your application and to better understand the proposal and its potential effects on the environment, further information is requested under Section 92(1) of the Resource Management Act 1991 (RMA).

Requested Information

The following additional information is requested for the reasons set out below:

LANDSCAPE

Methodology

1. Please confirm if the Assessment is consistent with the latest guidelines for landscape assessment (Te Tangi A te Manu Aotearoa New Zealand Landscape Assessment Guidelines).

Landscape Character and Visual Amenity

2. The Assessment considers landscape character and visual amenity when assessing against the statutory context of the rural general zone and LCU13. This is useful, however, it would be helpful to provide an assessment of the proposal on overall landscape character (covering associative, perceptual and physical attributes) and visual amenity (including both public and private views).
3. The assessment provides photographs taken from the northern part of the Lake Hayes Track. The central and southern parts of the Lake Hayes Track (on the western side) continue to climb in elevation, and whilst located slightly further from the site, provide a 'front-on' view of the site (refer to Image 1 below). Please provide a visual simulation of the proposal from a view from this location to assist with understanding the effects and potential visibility of the proposal. Any visual simulation provided should be consistent with NZILA Tuia Pito Ora Best Practice Guide for Visual Simulations 10.2 and should illustrate the proposed vegetation clearance / management.



Assessment Against the Rural General Zone – Visual Amenity Landscape

4. Effects on Natural and Pastoral Character – please provide an assessment against 5.4.2.2 (3) (a) points i, ii and iii, giving specific consideration to:
 - a. Visual effects on the openness of the adjacent Lake Hayes ONF and Morven Hill ONF.
 - b. Effects of the proposal on the character of the Visual Amenity Landscape.
 - c. An assessment on any potential effects of over-domestication of the landscape.

Assessment Against LCU13

5. Please provide an overview assessment against the characteristics of LCU13 (where relevant). Specific consideration should also be given to:
 - a. The risk of exacerbating development sprawl.
 - b. Integration of buildings with landform and planting.
 - c. An assessment against LUC13's low capability to absorb additional development.

Conclusion

6. A conclusion is listed within the contents of the Assessment, however this is not included within the report. Please confirm if this has been unintentionally omitted.

Vegetation Management

7. Please confirm if consideration has been given to the survivability of vegetation within Area A should it be maintained to a height of 0.5m below the Finished Floor Level of the proposed dwelling. Many species may struggle to survive this level of pruning.
8. Please confirm if the assessment has considered the proposed vegetation management plan.

ENGINEERING

Potable Water Supply

9. Potable water is provided to the subject site via an existing connection from a bore situated on a neighbouring property on the northern side of the highway near the Bendemeer intersection. Please provide confirmation by way of an easement instrument which enables potable water to be legally pumped from the bore on Lot 4 DP 453236 to the subject site.
10. Please also provide a water capacity assessment which confirms there is sufficient capacity within the bore to accommodate an additional residential unit (as the development will result in 3 residential units onsite.) This should include the total amount of water able to be drawn from the bore and the total amount allocated to reliant properties in the nearby vicinity.

Firefighting

11. The servicing report by Clark Fortune McDonald and Associates does not provide a plan as how firefighting provision will be provided to the development. Please provide a plan which demonstrates compliance with the below condition:
 - a. domestic water and firefighting storage is to be provided. A minimum of 45,000 litres shall be maintained at all times as a static firefighting reserve within a 55,000 litre combination of tanks. Alternatively, a 7,000 litre firefighting reserve is to be provided for each residential unit in association with a domestic sprinkler system installed to an approved standard. A firefighting connection in accordance with Appendix B - SNZ PAS 4509:2008 (or superseding standard) is to be located no further than 90 metres, but no closer than 6 metres, from any proposed building on the site. Where pressure at the connection point/coupling is less than 100kPa (a suction source - see Appendix B, SNZ PAS 4509:2008 section B2), a 100mm

Suction Coupling (Female) complying with NZS 4505, is to be provided. Where pressure at the connection point/coupling is greater than 100kPa (a flooded source - see Appendix B, SNZ PAS 4509:2008 section B3), a 70mm Instantaneous Coupling (Female) complying with NZS 4505, is to be provided. Flooded and suction sources must be capable of providing a flow rate of 25 litres/sec at the connection point/coupling. The reserve capacities and flow rates stipulated above are relevant only for single family residential units. In the event that the proposed residential units provide for more than single family occupation then the consent holder should consult with the Fire and Emergency New Zealand (FENZ) as larger capacities and flow rates may be required.

The FENZ connection point/coupling, tank and hardstand area must be located so that it is not compromised in the event of a fire (more than 6m from a building).

The connection point/coupling shall have a hardstand area adjacent to it (within 5m) that is suitable for parking a fire service appliance. The hardstand area shall be located in the centre of a clear working space with a minimum width of 4.5 metres. Pavements or roadways providing access to the hardstand area must have a minimum formed width as required by Council's standards for rural roads (as per Council's Land Development and Subdivision Code of Practice). The roadway shall be trafficable in all weathers and be capable of withstanding an axle load of 8.2 tonnes or have a load bearing capacity of no less than the public roadway serving the property, whichever is the lower. Access shall be maintained at all times to the hardstand area.

Underground tanks or tanks that are partially buried (provided the top of the tank is no more than 1 metre above ground) may be accessed by an opening in the top of the tank whereby couplings are not required. A hardstand area adjacent to the tank is required in order to allow a fire service appliance to park on it and access to the hardstand area must be provided as above.

The FENZ connection point/coupling/fire hydrant/tank must be located so that it is clearly visible and/or provided with appropriate signage to enable connection of a fire appliance.

Firefighting water supply may be provided by means other than the above if the written approval of the Fire and Emergency New Zealand Fire Risk Management Officer is obtained for the proposed method. The firefighting water supply tank and/or the sprinkler system shall be installed prior to the occupation of the building.

Note: Fire and Emergency New Zealand considers that often the best method to achieve compliance with SNZ PAS 4509:2008 is through the installation of a home sprinkler system in accordance with Fire Systems for Houses SNZ 4517:2010, in each new residential unit. Given that the proposed residential unit is approximately 4.5km from the nearest FENZ Fire Station the response times of the New Zealand Volunteer Fire Brigade in an emergency situation may be constrained. It is strongly encouraged that a home sprinkler system be installed in each of the new residential unit(s).

Earthworks/Right to convey Water Easement

12. It is noted that the proposed earthworks will be carried out where a right to convey water easement extends along the western side of the existing and new residential unit. Cuts between 1-2m are shown on the earthworks plan in this area which could potentially daylight this infrastructure. Please detail how this easement and existing water infrastructure will be protected during the proposed earthworks.

PLANNING

Environment Court Decision

13. At the time RM220104 was submitted, a number of provisions of Chapter 24 were subject to outstanding appeals. Since then, ENV-2019-CHC-086 has been issued which resolves a number of these appeals. I have attached a copy of the decision for convenience.

This application represents a level of development above that anticipated by the zoning and in an area with a low capability to absorb additional development. In line with the recent Environment Court decision, which confirms a maximum density of "one residential unit per 80 hectares net site area", please can you provide an assessment specifically addressing the density of development proposed by this application? (Noting that this proposal seeks approval for three residential units on the 6.7 hectare site). Please also address any other relevant provisions that have been addressed in the Environment Court decision, particularly the provisional amendments to Policy 24.2.1.1 and Strategic Objective 3.2.5.8.

Responding to this request

What are your options? You may:

- a. Provide the information requested within 15 working days s92A(1)(a) of this letter **14 June 2022**, or;
- b. Tell us in writing the date you will be providing the information, if you need longer than 15 working days (section 92A(1)(b)). If you chose this option the date will need to be agreed with the writer. Or;
- c. Tell us in writing that you refuse to provide this information (section 92A(1)(c)).

What happens then?

Option 1

If you decide to provide the information under option (a) or (b) above, your application will be placed on hold until the information is received (section 88c(2)(b)). After that it will be taken off hold and the processing of the application will continue.

Option 2

If you chose option (c) above and refuse to provide the information, or;

If you agree to provide the information by an agreed date and then do not do so without obtained agreement of an alternative date with the writer, or;

You do not respond at all;

Section 95C of the RMA requires that the application must be publicly notified.

We strongly suggest that you choose options (a) and (b) above to avoid the notification of the application based on insufficient information.

Ngā mihi | with kind regards,
Ruth Mackay

Ruth Mackay | Resource Consents Planner | Planning and Development
Queenstown Lakes District Council
DDI: +64 3 450 0304
E: ruth.mackay@qldc.govt.nz



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