Appendix C: Permeability Test Results





Appendix D: Site Soils Assessment

Onsite Wastewater Disposal Site & Soils Assessment



Use for Subdivision or Land Use Resource Consent No slope stability issues identified

The design standard for waste water treatment and effluent disposal systems is AS/NZS 1547:2012. All references in this form relate to this standard.

Applications should provide sufficient information to demonstrate that all lots will be capable of accommodating an on-site system.

Site Description					
Property Owner:	Trojan Holdings				
Location Address:	Part Lot 1 DP 18290				
	Hogans Gully Rd, Queenstown				
Legal Description (eg	Lot3 DP1234) : Part Lot 1 DP 18290				
List any existing cons	sents related to waste disposal on the site:				
-	of development / source of waste water:				
The number and size	of the lots being created: <u>3 lots</u> , between 1.616 and 2.162 ha in size.				
Site Assessment (re	efer to Tables R1 & R2 for setback distances to site features)				
Land use	Wakatipu Basin Rural Amenity Zone				
Topography	Gently sloping				
Slope angle	5-15°				
Aspect	North-northwest				
Vegetation cover	Grass and scattered bushes				
Areas of potential po	nding As indicated on GeoSolve Site Plan				
Ephemeral streams	N/A				
Drainage patterns and overland paths					
As indicated on GeoSolve Site Plan					
Flood potential (show with return period on site plan) <u>N/A</u>					
Distance to nearest water body50 m					
Water bores with 50n	n (reference ORC Maps)ORC Well F41/070				
Other Site Features	Nil				

Assuming trenches and beds, Conservative rates of 15 mm/d, maximum rates of 25 mm/d and secondary treatment effluent rates of 50 mm/d.

Slope stability assessment details – summarise any areas unsuitable for waste water irrigation. (Attach report if applicable): ______

No slope stability issues identified

(Highest potential) Depth to ground water:

Summer ______2.5 m

Winter _____

Information Source Test pits and ORC well data

What is the potential for waste water to short circuit through permeable soils to surface and / or ground water? Low potential. Shallow gradient of site and observed thickness of soils underlying

the site

Soil Investigation (Appendix C)

Field investigation date: 30-31 May, 1 June 2022

Number of test pit bores (C3.5.4): 18

Soil investigation addendum to be attached that includes a plan showing test pit or bore location, log results and photos of the site profile.

If fill material was encountered during the soil investigation state how this will impact on the waste water system: No fill material encountered

Average depth of topsoil: 0.3 m

Indicative permeability (Appendix G) : <u>1.4 - 12 m/day</u>

Percolation test method (refer to B6 for applicability) : <u>Open soak pit test</u> (attach report if applicable)

Soil Category (Table 5.1)	Soil Texture (Appendix E)	Drainage	Tick One
1	Gravel and sands	Rapid	х
2	Sandy loams	Free	Х
3	Loams	Good	
4	Clay loams	Moderate	
5	Light clays	Moderate to slow	
6	Medium to heavy clays	Slow	

Reasons for placing in stated category: Soil and grain size and permeability observed in testing.

Multiple soil types tested, see Section 7 of GeoSolve report for additional details.

Loading rate DLP (Tab	Assuming trenches and beds, Conservative rates of 15 mm/d, maximum rates of 25 mm/d and secondary treatment effluent rates of 50 mm/d.
Loading rate, DLR (Tab	Soakage test results
Explanation for propose	ed loading rate:
Recommendations f	rom site and soils assessment
Specify any design con	
	itable for location of the disposal field treatment and/or disposal systems
	tion to enable successful effluent treatment
Groundwater level to b	e considered by designer. Wastewater to target outwash gravel to achieve
soil class 1 (soil class	2 for outwash sand - see Section 7 of GeoSolve report for further details).
Attachments Checkli	st
Co	ppy of existing consents
	bil investigation addendum
	-
	scale site plan, the following must be included on the plan: uildings

Boundaries Retaining Walls Embankments Water bodies Flood potential Other septic tanks / treatment systems Water bores Existing and proposed trees and shrubs Direction of ground water flow North arrow Note that an Otago Regional Council (ORC) consent may also be required to discharge domestic waste water to land if any of the following apply:

- Daily discharge volume exceeds 2,000 litres per day
- Discharge will occur in a groundwater protection zone
- Discharge will occur within 50 metres of a surface water body (natural or manmade)
- Discharge will occur within 50 metres of an existing bore/well
- Discharge will result in a direct discharge into a drain/water ace/ground water
- Discharge may runoff onto another persons' property

If any of these apply then we recommend that you correspond with the ORC;

Otago Regional Council "The Station" (upstairs) Cnr. Camp and Shotover Streets P O Box 958 Queenstown 9300

Tel: 03 442 5681

I believe to the best of my knowledge that the information provided in this assessment is true and complete. I have the necessary experience and qualifications as defined in Section 3.3 AS/NZS 1547:2012 to undertake this assessment in accordance with the requirements of AS/NZS 1547:2012:

Company:	GeoSolve Ltd	
Email:	mstemland@geosolve.co.nz	
Phone number:	0211707097	
Name:	Marte Bakka Stemland	
Signature:	Mark Stalland	
Date:	17/06/22	

Queenstown Lakes District Council Private Bag 50072 10 Gorge Road QUEENSTOWN 9348
 Phone:
 03 441 0499

 Fax:
 03 442 4778

 Email:
 services@qldc.govt.nz

 Website:
 www.qldc.govt.nz



SERVICES ASSESSMENT REPORT

MJ & BP DAVIES FAMILY TRUST PROPOSED SUBDIVISION 156 HOGANS GULLY ROAD, QUEENSTOWN June 2022



Revision No	Date	Description	Prepared by	Checked by	Approved by
	20.06.2022	Issued for Resource Consent	Joshua	Chris	Chris
			Jarvie	Hansen	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 rural subdivision at 156 Hogans Gully Road, Queenstown.

The proposal seeks to create 5 allotments, comprising 3 new rural living allotments, one rural living allotment with an existing residential dwelling and the balance land being amalgamated to the adjoining property being the Hogan's Gully Golf Resort.

The site is held in three separate titles currently legally described as Part Lot 1 DP 18290 held in Record of Title OT17C/602, Lot 1 DP25533 held in Record of Title OT17C/601 & Lot 2 DP18290 held in Record of Title OT10D/416. The existing three titles will become 4 titles on completion of the proposed subdivision.

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 access from Hogan's Gully Road to the existing house site that is going to be retained. The existing sealed accessway has a nominal width of 3.0m with grassed shoulders. The maximum gradient is approximately 1 in 6 (16.66%).

The application is proposing three new accessways, two of which junction Hogans Gully Road. The additional accessways will also be sealed with a nominal width of 3.0m with grassed shoulders and swales. Passings bays will be created at 100m intervals.

The intersections with Hogan Gully Road will be constructed to diagram 8 of Chapter 27 Transport section or Appendix 7 Diagram 2 of the Code of Practice and will have a 6m width sealed to the road boundary. The maximum grade of the new accessways will be 1 in 8 (12.5%). The access to Lots 1 and 2 is to be shared from the entrance off Hogans Gully Road to the junction where a separate access for Lot 2 comes off. Sight distances within the development are adequate due to the moderately rolling terrain.

The length of roading required for the new accessways is approximately 540m. Plan and longsections are provided for the proposed accesses.

The new access formation servicing the new allotments is compliant with Figure E1 of the QLDC CoP.

A site visit was undertaken to determine compliance with minimum sight distances for the new intersections on Hogans Gully Road as shown in the images below.



Sight distances available from access location to Lots 1 and 2.

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The measured sight distances are shown on the drawing and have been confirmed to comply with the min. requirement of 115m for 80km/h road



Looking West



Looking East Sight distances available from access location to Lot 3.

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The measured sight distance for access to Lot 3 will require trimming of vegetation and likely some minor re-shaping of the existing batter to achieve 115m to the west. Sight distance to the east has been measured and complies with the min. requirement of 115m for 80km/h road.

5 WASTEWATER

There are four potential options to deal with the wastewater generated from this development.

- 1. Private onsite wastewater treatment system
- 2. Connect to existing Bendemeer wastewater scheme.
- 3. Connect to existing QLDC Lake Hayes wastewater scheme.
- 4. Connect to proposed Hogans Gully Golf Course development scheme.

5.1 Existing services

The existing dwelling disposes of wastewater to ground via an onsite system and land application area located in the area shown below.



It is anticipated that this existing treatment system will remain in operation for the existing dwelling.

There are two wastewater schemes located within the vicinity of the site, QLDC Lake Hayes Wastewater scheme and Bendemeer Wastewater scheme which connects to the Lake Hayes Scheme:

The Lake Hayes wastewater scheme is located on Arrowtown Lake Hayes Road and drains by gravity to a wastewater pump station located at Bendemeer Bay Reserve, which is then pumped to the Shotover Wastewater treatment plant.

The Bendemeer wastewater scheme is a private scheme located within the Bendemeer development. We understand however that residents of Bendmeer are working with QLDC to vest the scheme. The Bendemeer wastewater scheme connects into the Lake Hayes wastewater scheme on Arrowtown Lake Hayes Road.

The image below shows the closest portion of the reticulated sewer in both schemes.

Connection to the Bendemeer scheme may require new easements to be obtained and capacity of the existing network to be confirmed.



5.2 Proposed residential demand

The existing dwelling contains 5 bedrooms with three bathrooms. It is anticipated that the three new residential lots will be of similar scale. Under QLDC COP residential demand would be 250 litres per person per day based on 5 people per dwelling. With guests, 10 occupants might be anticipated in peak times.

5.3 On Site Wastewater Disposal System

The Geosolve report that accompanies the application assesses and confirms that on-site disposal is feasible.

The site is located on the edge of two main catchment boundaries, the Lake Hayes Catchment, and the Arrow River Catchment. Due to the sensitive nature of the Lake Hayes receiving environment, preference would be to avoid locating the land application area within the Lake Hayes Catchment. The below image shows a suitable area for applying the treated wastewater to land within the Arrow River Catchment.



Catchment areas and proposed wastewater land application area.

The boundary between the two catchments was derived from HEC-HMS using LiDAR data.

A communal tertiary wastewater treatment system could be utilised to treat the wastewater to a high level and dispose to ground via a designated land application area.

A suitable design for a communal wastewater system would contain individual Septic Tank Effluent Pump (STEP) systems located at each dwelling for primary treatment. The primary treated wastewater would then be pumped to a communal treatment system such as the AdvanTex Wastewater Treatment Plant supplied by Innoflow. This system contains a dual chamber recirculation / TET tank and Advavntex AX pods that treat the wastewater to appropriate quality. The treated wastewater will then be pumped to a suitable location within the site to dispose to ground via a conventional bed or irrigation drip lines.

5.4 Reticulated connection

Another option for servicing the proposed dwellings 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 a communal tank to be pumped further into a suitable wastewater scheme as described below.

5.4.1 Bendemeer Wastewater Scheme

There is existing wastewater infrastructure located in the adjacent development Bendemeer. The infrastructure is currently private, although it is proposed that Council may vest the associated infrastructure. It would be possible to connect a Low Pressure Sewer into the existing sewer line in Bendemeer Lane. This would require approximately 600m of trenching and materials. The feasibility of this option depends on the vesting of the infrastructure in Council.

5.4.2 Lake Hayes Wastewater Scheme

The closest connection to the Lake Hayes Wastewater Scheme is at the intersection of Hogans Gully Road and Arrowtown Lake Hayes Road. This would require approximately 1500m of trenching and materials to connect to the scheme, which is cost prohibitive, but possible.

5.4.3 Proposed Hogans Gully Golf Course Development

Another possible connection could be to the wastewater scheme for the proposed Hogans Gully Golf Course development. Rezoning of the adjoining land for a Resort and Land Use and subdivision consents have been granted for an 18 hole championship Golf Course and associated club house, residential and visitor accommodation reference RM180497.

Upon development of the Golf Course, new reticulation will be required to service the new demand. However given timing for giving effect to this application and the Golf Course development is unknown, there is insufficient detail to confirm full feasibility at this time.

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.

6.2 Stormwater Catchment.

The site lies on the edge of two larger catchments namely the Lake Hayes and Arrow River Catchments. The proposed building platforms and the existing dwelling lie within the wider Lake Hayes Catchment.

The extent of impervious areas for each new dwelling will be approximately 1000m² and the existing dwelling has an impervious area of approximately 1200m² including a 600m² tennis court.

Existing overland flow paths from the Lake Hayes Catchment exit down slope to the north over pasture until it meets a low point within the site. The topography then slopes westwards towards Lake Hayes and eastwards to the water table on Hogans Gully Road which then also flows towards Lake Hayes.

Existing overland flow paths from the Arrow River Catchment flow southwards and is collected in a natural watercourse and directed towards McDonnell Road where it eventually drains into the Arrow River. No additional impervious areas are expected to be generated within the Arrow River Catchment.

An Arrow Irrigation water race traverses through the development and forms a cut off drain for sheet flow above the proposed platforms. From inspecting aerial imagery, it appears that the race is seeping water into the development as shown in the below image.



Water seeping from Arrow Irrigation race (QLDC GIS)

As such, the race cannot be relied on for a cut off drain. As a result of this, further mitigation for protection of the proposed building platforms (Lots 2 and 3) will be required in the form of further cut off drains and / or deflection bunding to deflect water into the ponds. Remediation work may also be required to the race to ensure stability such as piping portions of the race. This work is subject to Arrow Irrigation Ltd approval.

6.3 Design criteria

For the proposed dwellings, 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.

Any additional runoff from larger storms can be directed to the proposed ponds by the way of roadside drainage on the new accessways.

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

The Geosolve report that accompanies the application assesses and confirms that on-site disposal of stormwater is feasible subject to design and construction requirements as outlined in the Geosolve report.

7 WATER SUPPLY

7.1 Existing Infrastructure

There is an existing 100mm Council watermain located within the Hogans Gully Road reserve. The existing dwelling has a water toby connected to this reticulated supply.

There is also an existing bore located at the intersection of the existing access with Hogans Gully Road. We understand that the bore has since become redundant with the existing dwelling connecting to the reticulated supply.

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 could keep the ponds topped up over the drier months.

7.2 Water supply design

It is proposed that the three additional lots will connect to the Council reticulated water supply on Hogans Gully Road. Three new connections will be made onto the existing main for laterals to extend to the new building platforms.

Alternatively, a 100mm watermain loop could be constructed within the development connecting to the Hogans Gully Road watermain to supply adequate pressure for fire hydrants.

Each of the proposed residential dwellings 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 I / person / day; occupancy = 3 peak factor: 4.0

Number of residential units: 3 average daily consumption; 6,300 I / day; peak hour flow; 0.1 I / second.

7.3 Required Firefighting demand

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

There are existing hydrants on the 100mm watermain on Hogans Gully Road. The building platform for Lot 1 lies within the 135m hose run radius of two of these hydrants that can be used for firefighting.

The proposed ponds within the development have an approximate static volume of 250,000l. The ponds are within 90m of any building platform thus is acceptable for emergency access for firefighting.

Alternatively, static fire fighting tanks can be installed within 90m of the proposed building platform with a minimum static reserve of 45,000l.

8 POWER, TELECOMMUNICATIONS

There is existing electricity network supplying the existing building on the property. An 15KvA pole mounted transformer supplies power to the existing dwelling.

Telecommunications services exist and service the existing dwelling on site and on Hogans Gully Road. This network would be suitable to service the three additional allotments.

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.

Confirmation letters from the respective network owners are attached to this report.

AURORA ENERGY LIMITED PO Box 5140, Dunedin 9058 PH 0800 22 00 05 WEB www.auroraenergy.co.nz



9 June 2022

Chris Hansen Clark Fortune McDonald & Associates

Sent via email only: chansen@cfma.co.nz

Dear Chris,

ELECTRICITY SUPPLY AVAILABILITY FOR A PROPOSED FOUR LOT SUBDIVISION. 156 HOGANS GULLY ROAD, QUEENSTOWN. PART LOT 1 DP 18290 AND LOT 1 DP 25533.

Thank you for your inquiry outlining the above proposed development.

Subject to technical, legal and commercial requirements, Aurora Energy can make a Point of Supply¹ (PoS) available for this development.

<u>Disclaimer</u>

This letter confirms that a PoS **can** be made available. This letter **does not** imply that a PoS is available now, or that Aurora Energy will make a PoS available at its cost.

Next Steps

To arrange an electricity connection to the Aurora Energy network, a connection application will be required. General and technical requirements for electricity connections are contained in Aurora Energy's Network Connection Standard. Connection application forms and the Network Connection Standard are available from www.auroraenergy.co.nz.

Yours sincerely

Niel Frear CUSTOMER INITIATED WORKS MANAGER

¹ Point of Supply is defined in section 2(3) of the Electricity Act 1993.

Chorus New Zealand Limited

28 June 2022

Chorus reference: 10289149 Your reference: 15672

Attention: Chris Hansen

Quote: New Property Development

2 connections at 156 Hogans Gully Road, Arrowtown, Queenstown-Lakes District, 9371 Your project: 156 Hogans Gully Road, Arrowtown 9371

Thank you for your enquiry about having Chorus network provided for the above development.

Chorus is pleased to advise that, as at the date of this letter, we are able to provide reticulation for this property development based upon the information that has been provided:

Copper network

\$3,200.00

The total contribution we would require from you is **\$3,680.00 (including GST)**. This fee is a contribution towards the overall cost that Chorus incurs to link your development to our network. This quote is valid for 90 days from 28 June 2022. This quote is conditional on you accepting a New Property Development Contract with us for the above development.

If you choose to have Chorus provide reticulation for your property development, please log back into your account and finalise your details. If there are any changes to the information you have supplied, please amend them online and a new quote will be generated. This quote is based on information given by you and any errors or omissions are your responsibility. We reserve the right to withdraw this quote and requote should we become aware of additional information that would impact the scope of this letter.

Once you would like to proceed with this quote and have confirmed all your details, we will provide you with the full New Property Development Contract, and upon confirmation you have accepted the terms and paid the required contribution, we will start on the design and then build.

For more information on what's involved in getting your development connected, visit our website <u>www.chorus.co.nz/develop-with-chorus</u>

Kind Regards Chorus New Property Development Team





Davies – Hogans Gully Road Landscape Assessment August 2022

INTRODUCTION

- 1. This landscape assessment has been prepared by Baxter Design to assess the potential visual effects of the subdivision of an existing title into 4 lots, creating 3 new lots with residential building platforms and amending boundaries to include an existing dwelling on the 4th lot. This report includes:
 - Description of the site and background,
 - Description of the proposal,
 - Landscape classification and methodology
 - Landscape assessment,
 - Conclusion.
- 2. The following Attachments are included in this report:

Attachment A: Site wide context plan Attachment B: Proposed New Lots Attachment C: Earthworks plan Attachment D: Aerial Context – West Attachment E: Aerial Context – East Attachment F: Aerial Context – South Attachment G: Catchment Character Photos Attachment H: Adjacent Lot Sizes Attachment I: QLDC LCU Map

(Baxter Design 4345 – SK06) (Baxter Design 4345 – SK09) (Baxter Design 4345 – SK11) (Baxter Design 4345 – D) (Baxter Design 4345 – E) (Baxter Design 4345 – F) (Baxter Design 4345 – G) (Baxter Design 4345 – SK12)

DESCRIPTION OF SITE AND BACKGROUND

- 3. The site ('site' being the land subject to this application) is located on the south side of Hogans Gully Road, approximately 1.1 kilometres from the intersection of Hogans Gully Road and Arrowtown Lake Hayes Road and approximately 1.4 kilometres from the intersection of Hogans Gully Road and McDonnell Road.
- 4. The existing site sits against the major escarpment that borders the landforms south of Hogans Gully Road, being the Hogans Gully 'valley'. That escarpment is clearly defined (refer Attachments D-F) and runs from the eastern portion of the site, continuing west along Hogans Gully Road towards Lake Hayes Arrowtown Road, turning south and then forming the eastern edge of the Lake Hayes 'valley' landscape. The escarpment is a clearly formed and visible landscape feature, broadly separating the wide plateau on the south of the

escarpment that contains the moraine based hummocky hills of the Bendemeer rural - residential area from the Hogans Gully Road 'valley'.

- 5. The Hogans Gully 'valley' is a clearly defined landform, originating in in the vicinity of the site and then opening up to the west, near the Arrowtown Lake Hayes Road. Towards the eastern end of the 'valley', in the vicinity of the site, the landform is defined by hummocky moraine within the wider enclosing elements of the Bendemeer plateau and rising rolling land to the north of Hogans Gully Road. The valley landform within the vicinity of the site is complex in character, gently rolling and rising towards the east.
- 6. West of the site from Arrowtown Lake Hayes Road to the site and south of Hogans Gully Road, and to the immediate west of the site, the landscape displays a complex mix of well-established rural residential blocks, with shelterbelts, dwellings, small open paddocks and all the trappings of an established rural residential landscape.
- 7. The land southeast of the intersection of Arrowtown Lake Hayes Road and Hogans Gully Road is a reasonably open and semi pastoral landscape, albeit fragmented by small paddocks and equestrian associated structure. That land was previously zoned Rural Residential in the ODP and is located in the Wakatipu Basin Lifestyle Precinct (WBLP) in the PDP and it is realistic to expect that semi-pastoral landscape will develop into a more rural residential character over time, similar in appearance to the established rural residential character of the south side of Hogans Gully Road.
- 8. To the north of Hogans Gully Road, moving east from Arrowtown Lake Hayes Road, the landscape character is open and pastoral, characterised by fenced paddock, shelterbelt and well separated dwellings. Heading east, the Hogans Gully 'valley' narrows in width, in a still rolling moraine landscape, rising and visually contained within higher landform with small wetlands to the north of the road.
- 9. The Hogans Gully roadside landscape character is characterised by a continuous mix of Hawthorne hedge, Poplar shelterbelts and established tree plantings, interspersed with the occasional stone wall, gateway features, mailboxes and driveways, clearly an established rural – residential character.



Aerial drone photo looking east across site February 2022

10. The site itself is located in a well - defined and visually and physically enclosed landscape. The south edge of the site is bordered by the steeply rising escarpment described earlier in this report. That portion of the escarpment is covered in exotic grasses with occasional Matagouri, Elderberry and sweet briar. The escarpment wraps around the site up towards Hogans Gully Road on the eastern edge of the site and 'bookending' the lower landforms that exist between the escarpment face and Hogan Gully Road, from this site and continuing towards Lake Hayes – Arrowtown Road. The central portion of the landscape, within which the residential building platforms (RBP's) are to be located, is a gently rolling landform of cultivated and managed grassland.



The site – existing landform

- 11. From the south boundary of the site, the land drops to the north approximately 5 metres over gently sloping land to a minor valley then rises approximately 5 metres to a small hillock centrally located within the site, adjacent to Hogans Gully Road located. There are no distinguishing landform characteristics within the site aside from the rolling pastoral landform.
- 12. An established block of Pine is located on the eastern boundary of the site behind which a driveway accesses off Hogans Gully Road to an established dwelling on the peak of the escarpment, to be Lot 4. That dwelling is well established, approximately 25 years old, with established garden and shelterbelt. To the direct west, bordering the site, is a shelterbelt, with an established rural residential dwelling on approximately 2 ha of land.
- 13. Directly across Hogans Gully Road, to the north, the landform extends into a small 'valley' contained by a minor escarpment to the north. An established rural residential block, with established plantings and a dwelling, is located directly adjacent to Hogan Gully Road on that lot.
- 14. To the north of Hogans Gully Road the Hogans Gully valley is flanked by a small kanuka covered escarpment that visually contains the top eastern end of the valley. Further east up Hogans Gully Road, on the north side of the road, is a recently completed dwelling and shed, visible from the road, with an equestrian dressage area adjacent to that dwelling and sheds.

- 15. Continuing to the north along Hogans Gully Road the enclosing landform reduces in scale with the landscape character becoming less visibly rural residential in character, aside from an established dwelling directly adjacent to the road. A small wetland system, developed by the owner to the north of Hogans Gully Road is visible adjacent to the road.
- 16. To the east and south of the development is the Bendemeer Zone and the Hogans Gully Resort Zone, which are separated from this site both visually and physically by landform.
- 17. The site is located within landscape unit (refer Attachment G) LCU 15 (Schedule 24.8 Landscape Character Units QLDC Proposed District Plan) where the landform patterns are described as 'Gully framed by moraine type landform, with the latter characterised by hummocky hills interspersed with plateaus'. LCU 15 extends over and covers the recently re-zoned area containing the Hogans Gully Resort zone with the site located in a small finger of that LCU in its northwest corner. (It is noted that, from a landscape perspective it appears that the site could have been located more logically within LCU 12 Lake Hayes Rural Residential as that zone extends up Hogans Gully Road within the eastern end of that LCU located amongst existing and established rural residential development as opposed to the end of it. There is a landscape logic for that unit to extend to the end of that valley landform at the east, enclosing the site and the existing rural residential development that surrounds it).

DESCRIPTION OF THE PROPOSAL

- 18. The application seeks to subdivide the wider property into 4 lots, which will include:
 - Lot 1 1.616 hectares with RBP
 - Lot 2 1.977 hectares with RBP
 - Lot 3 2.162 hectares with RBP
 - Lot 4 4.483 hectares with an existing dwelling and established garden / tree planting.
- 19. The existing residential dwelling located on Lot 4 is located on the top of the escarpment on relatively flat land directly south of proposed Lot 2, elevated approximately 45 metres above proposed lot 2 and accessed by an existing driveway from Hogans Gully Road.
- 20. The attached plans (refer Attachments A + B) show the three proposed building platforms (RBP's) on Lots 1, 2 + 3.
- 21. The proposed development includes 3 lots ranging in size from 1.616ha to 2ha. To be located on the rolling piece of land south of Hogans Gully Road. There are 2 proposed new driveways off Hogans Gully Roads, one on the northeast corner of the site to access the proposed RBPs on Lots 1 & 2 and another driveway in the northeast corner of the site to access Lot 3. Attachments A-C show the proposed layout of the development.
- 22. The following is noted:
 - Earthworks will be undertaken on the site to enable flat RBP's to be formed and to enable appropriate outdoor living areas.
 - Each lot shows a specific RBP of 1000m2, shaped to fit the lot and land, with a datum fixed for floor level
 - Two small pond / wetland areas are shown in the minor 'valley' landform in front of Lots 2 & 3, utilising existing low areas and a small portion of the existing water rights from the Arrow Irrigation race.

- Mass planting of Mountain Beech outside of platforms
- 23. A specific set of design controls has been developed for the site . The principal components of those controls include:
 - maximum building heights of 5.5m for Lots 2 & 3, 4.5m for Lot 1
 - site coverage restrictions of 55% of the RBP's
 - the retention of grassland outside of platforms (aside from farm fencing between lots)
 - specific landscape controls within the specified curtilage areas
 - site coverage restrictions of 55% of the RBP's
 - Exterior cladding limited to two materials on any single elevation, from materials including, natural or stained timber, steel tray, concrete or locally sourced schist stone,
 - Roof materials limited to a single recessive colour only in steel tray or similar,
 - All exterior cladding shall be a recessive colour and have an LRV between 7-27%.
- 24. As above, the proposed RBPs will require levelling of the proposed curtilage area and driveway. The earthworks have been designed to continue the soft rolling forms which currently exist on site. There will be disturbance during construction however, as has been undertaken on many other adjacent sites, the extent of earthworks will not be distinguishable when completed and grassed.

LANDSCAPE CLASSIFICATION AND METHODOLOGY

- 25. The assessment of effects scale used in this assessment is based on the New Zealand Institute of Landscape Architects (NZILA) 'Landscape Assessment and Sustainable Management 10.1' Best Practice Note. Appendix 1 outlines this ranking and associated explanation.
- 26. The proposed site is classified as within the Rural General Zone in the Operative District Plan (ODP) and in the Wakatipu Basin Rural Amenity Zone (WBRAZ) in the Proposed District Plan (PDP).

LANDSCAPE ASSESSMENT

Effects on natural and pastoral character

- 27. The proposed development will be located within the confines of the escarpment landform that contains the existing and established rural residential neighbourhood of Hogans Gully Road. That pattern of development abuts the site and continues, although decreasingly, east up Hogans Gully Road. Attachments D F shows the existing landscape character of the Hogans Gully Road catchment. Existing dwellings in the immediate vicinity are accessed by private driveways and shared ROWs off Hogans Gully Road. The landscape character of the Hogans Gully Road catchment. Existing dwellings in the immediate of the Hogans Gully Road corridor is an established rural residential landscape, particularly on the south side of the road. That landscape is characterised by mailboxes, entry features to driveways (stone and timber), large groups of established exotic and native vegetation in both groups and shelterbelts and continuous glimpses of dwellings, basically all the trappings of established rural residential development, within a visibly enclosed 'valley' landscape.
- 28. From Hogans Gully Road and the surrounding private properties, nearby existing dwellings are partially visible through breaks in the foreground vegetation and landform. Partial visibility of dwellings is not unexpected within this established rural residential neighbourhood.

29. The scale and recessive architectural design of the proposed dwellings (on proposed Lots 1-3) will continue that character and will be sympathetic to the surrounding rural residential characteristics. The location of the proposed RBPs responds to that natural landform with the site enclosed by the escarpment landform to the south and east of the site.



Aerial Drone photo looking southwest over site February 2022

30. Taking into account the above, it is considered that the proposed development responds appropriately to the surrounding rural residential landscape and will have a low adverse effect on the existing landscape characteristics and quality.

Visibility of development

- 31. The visual assessment locations considered in this report include potential visibility from Hogans Gully Road and nearby private properties.
- 32. Visibility of the site, from public places, is restricted to a short section of Hogans Gully Road, over approximately 350 metres of the road. Dwellings on the proposed RBP's will be glimpsed from short sections of Hogans Gully Road from the northeast and northwest corners of the site, over approximately 30-40m of the road at each of those corners, although the proposed mountain beech planting will restrict those views mostly. Dwellings on proposed RBPs 2 & 3 will be located approximately 75-90 metres south from Hogans Gully Road, a similar distance to the setback from Hogans Gully Road of the existing dwelling directly west of the site.
- 33. Minor earth shaping will be undertaken around the Lot 1 RBP to mitigate visibility of a future dwelling on the site and the recommended building height, in the proposed design controls, has been set at 4.5m above a foxed datum (after site analysis), 1m lower than dwellings on the RPBs of Lots 2 & 3, to mitigate visibility of a future dwelling on that site. A dwelling on the RBP on Lot 1, although 35 metres back from Hogans Gully Road, will be largely screened by the existing rising landform between Hogans Gully Road and the platform

and will be less visible than dwellings of a similar separation from the road directly across Hogans Gully Road and to the east.

- 34. To mitigate potential visibility of the dwellings from Hogans Gully Road, clustered mountain beech tree planting is proposed around the lots (refer **Attachments A & B**). The proposed tree planting is shaped around the finished landform.
- 35. Taking the above into account, dwellings on the proposed RBP's may be glimpsed only from Hogans Gully Road. Given the rural-residential character of Hogans Gully Road, from Arrowtown Lake Hayes Road to the site and past the site, the experience of glimpses of dwellings at distance is entirely appropriate and in accord with the character of Hogans Gully Road. It would be realistic to expect that landowners may undertake further planting within their curtilage areas to screen those views, albeit minor. In this context, total screening is inappropriate.
- 36. Taking the above into account, any potential visibility will have a very low effect on the existing landscape character and quality.
- 37. Taking into account the proposed mitigation planting, lack of visibility and recessive materials that must be used in the architectural design of future dwellings, it is considered that the proposed development will have a low potential adverse effect on landscape views from adjacent private properties.

Form and density of development

- 38. The proposal subdivides the wider property into 4 lots, at an average size of 2.55 hectares per lot including Lot 4 or 1.91 ha per lot for Lots 1-3. This is in keeping with the landscape characteristics of the surrounding rural residential neighbourhood to the west of the site. Attachment H shows the size of nearby lots in the Hogans Gully area. The scale of the development and the proposed lots will not compromise the existing landscape characteristics and any visibility will be appropriately mitigated through the design controls and proposed planting (refer Attachment B).
- 39. LCU 15 describes the settlement patterns in this landscape unit as 'Sparse scatterings of dwellings, generally set back from the road and / or well contained by landform / vegetation patterns. Not consented but unbuilt platforms evident. Typical lot sizes: predominantly greater than 20ha. Some smaller lots (less than 4ha and 4-10ha) at northwest corner of unit'. This statement describes more realistically the settlement patterns of the wider part of LCU 15, and is not a relevant description of this portion of LCU 15, being the western part of the Hogans Gully Road Valley because of the well-established rural living character.

24.8 Schedule 24.8 Landscape Character Units



Extract PDP Schedule 24.8 Landscape Character Units

- 40. The settlement description in LCU 15, The Lake Hayes Rural Residential Unit, better describes the density of development in this portion of Hogans Gully Road, being '*Typical lot sizes: almost all of the lots under 10ha*'. With naturalness in that LCU described as '*Generally a low degree of naturalness as a consequence of the frequency and exposure of buildings.*
- 41. This report now assesses the relevant matters set out in Chapter 24 of the PDP and refer to relevant matters in the LCU12 description during that assessment, describing the alignment of the proposed development against those matters.

PDP - Chapter 24 – Wakatipu Basin

42. Objective 24.2.1 Landscape character and visual amenity values in the Wakatipu Basin are maintained or enhanced

43. The proposed development is located within the LCU 15 landscape unit. The landscape character of this unit is largely an open rolling landscape covering predominantly the upper plateau area were the Hogans Gully Resort Zone (HGRZ) is located. The southern portion of that landscape, being the flatter open land located directly north of SH6 is also within the HGRZ (and within LCU17) but is described as a rural protection area under the HGRZ approved structure plan. The landscape character of the site is visually and physically separated from the broad landscapes of LCU15. To that end the landscape character and visual amenity values of LCU15 will not be adversely affected by this development.

44. The site is approximately 1.25km from the intersection of McDonnell Road and Centennial Avenue. Approaches to the site from both west and east along Hogans Gully Road traverse through a wellestablished quasi rural residential 'valley' with amenity values that are distinctly separate from the surrounding and enclosing landscapes. The site is enclosed roughly in the centre of the Hogan Gully Road length and the addition of 3 dwellings on this site in the location and form proposed is entirely appropriate given the surrounding landscape values. Any potential adverse effects on the existing character of the Hogan Gully Road landscape character and amenity values would be low.



Extract from Attachment I showing site location on QLDC LCU map

- 45. From private views, the same conclusion is reached.
- 46. Overall, it is established the landscape character and visual amenity values of the Wakatipu Basin, and in particular LCU15 (and the neighbouring LCU12) will be maintained, and the proposal achieves Objective 24.2.1.

PDP Chapter 24 Policies

47. 24.2.1.2 Ensure subdivision and development is designed (including accessways, services, utilise and building platforms) to minimise inappropriate modification to the natural landform.

48. The proposed development will require landscaping to establish the platforms, noting that the 3 proposed dwellings will be on fixed datums. This approach gives certainty to the final shape of the land after development. Where there will be changes to the landform, those changes are shaped mimic the larger glacial landforms and are not 'bunds' as such. Earthworks were undertaken south of Hogans Gully Road on the lot directly west of the site and, after grass has established, is not perceptible as earthworks. The same applies to this site. Two driveway entries are proposed, approximately 410 metres apart which is entirely consistent with the pattern of entries on Hogans Gully Road.

49. 24.2.1.2 Ensure that subdivision and development maintains or enhances the landscape character and visual amenity values identified in Schedule 24.8 – Landscape Character Units.

- 50. The LC15 unit has a moderate absorption capability for additional development. In general, the descriptions in the LCU15 chart appear to be more appropriate for the wider open areas of that unit (HGRZ) not this small section of the unit:
 - Integration of buildings with landform and/or planting.

The site is located within a discrete, enclosed landform. Care has been taken to replicate surrounding residential patterns, avoiding steep cuts and batters and gently shaping the landform surrounding the dwelling.

• Potential Landscape Issues and constraints associated with additional development.

The proposed development will not be visible from Bendemeer, ONL's and the zig-zag lookout as from where the bulk of the LCU15 unit is visible and, given the enclosing landform, will not read as 'sprawl'.

• Environmental characteristics and visual amenity values to be maintained and enhanced

The proposed dwellings will be integrated within landform

- 51. **24.2.1.4** Maintain or enhance the landscape character and visual amenity values of the Rural Amenity zone including the Precinct and surrounding landscape context by:
 - a. Controlling the colour, scale, form, coverage, location (including setbacks) and height of buildings and associated infrastructure, vegetation and landscape elements.

The application is for 3 dwellings on shaped platforms, the soft rolling glacial landscape being preserved in character, by appropriate land-shaping, potentially enhanced. The Dwellings on proposed Lots 2 & 3 are setback 170 and 145m from Hogan Gully Road respectively. This is a greater setback to many existing dwellings on Hogan Gully. The dwelling on proposed Lot 1 is closer to the road (35 metres) but not dissimilar to several other dwellings visible from Hogan Gully Road. To that end the setbacks are considered appropriate in the context of the Hogan Gully Road character. The heights, cladding, scale, form and colour of the dwellings will ensure an appropriate, retrained consistency and amenity, not out of place on Hogan Gully Road.

53. **24.2.1.5** Require all buildings to be located and designed so that they do not compromise the landscape and amenity values and the natural character of Outstanding Natural Features and Outstanding Natural Landscapes that are either adjacent to the building or where the building is in the foreground of views from a public road or reserve of the Outstanding Natural Landscape or Outstanding Natural Feature.

The proposed dwellings will not detract from ONL values, neither will it detract from ONF values due to its location, surrounding topography and separation from ONLs and ONFs.

- 54. 24.2.1.11 Provide for activities that maintain a sense of spaciousness in which buildings are subservient to natural landscape elements.
 The proposed dwellings are to be located at the base of a large escarpment and therefore by location will appear subservient to wider landscape elements.
- 55. **24.2.1.15** Require buildings, or building platforms identified through subdivision, to maintain views from roads to Outstanding Natural Features and the surrounding mountain Outstanding Natural Landscape context, where such views exist, including by:
 - a. Implementing road setback standards; and
 - b. Ensuring that earthworks and mounding, and vegetation planting within any road setback, particularly where these are for building mitigation and/or privacy, do not detract from the views to Outstanding Natural Features or Outstanding Natural Landscapes; while
 - c. Recognising that for some sites, compliance with a prescribed road setback standard is not practicable due to the size and dimensions, or the application of other setback requirements to the site.

As discussed in this report, although the mounding and landscaping associated with the subdivision will be visible from Hogans Gully Road, they will not detract from the views of the ONFs, and view of the surrounding ONL will be maintained.

56. **24.2.4.1** Avoid adverse cumulative impacts on ecosystem services and nature conservation values.

The proposed development avoids cumulative impacts on ecosystems through its location, within an area which has been historically grazed. No adverse cumulative impacts on ecosystem services and nature conservation values will arise from this development.

57. **24.2.4.9** Encourage the planting, retention and enhancement of indigenous vegetation that is appropriate to the area and planted at a scale, density, pattern and composition that enhances indigenous biodiversity values, particularly in locations such as gullies and riparian areas, or to provide

Described above. There are no gullies or riparian areas in this site

CONCLUSION

58. Taking into account the unique qualities of this site, the existing landscape character and visual amenity values of the Hogan Gully Road landscape character and, importantly, the rural – residential character of the receiving environment, any potential adverse effects arising from this proposed development and associated landscape works will be low and will not adversely affect the wider values of the surrounding landscape.

APPENDIX:

Table 1: Scale of Effects Reference

The effects scale used in this assessment is outlined in the table below. This effects scale is based on the New Zealand Institute of Landscape Architects (NZILA) 'Landscape Assessment and Sustainable Management 10.1' Best Practice Note¹. The explanations provided are based on the review of a number of scale of effects tables and the Auckland Council 'Information requirements for the assessment of Landscape and Visual Effects' (2017)².

NZILA best practice scale ¹ (used in this report)	Dictionary Definition (Collins)	Explanation
Negligible	 'An amount or effect that is so small that it is not worth considering or worrying about' 'Insignificant' 	 The proposed development is barely discernible or there are no changes to the existing character, features or landscape quality².
Very Low effect		 The proposed development is barely discernible with little change to the existing character, features or landscape quality². Any awareness of the proposal will have a very limited effect/change to the existing landscape character and quality.
Low effect	 'Small amount' 'Not considered to be very important because near the bottom of a particular scale' 	 A slight loss to the existing character, features or landscape quality². Any awareness of the proposal will be a minor component of/change to the wider landscape.
Moderate effect	 'Not extreme' 'Neither large nor small in amount or degree' 	 Partial change to the existing or distinctive features of the landscape and a small reduction in the perceived amenity². The proposal may form a visible or recognisable change/new element within the wider landscape, but will not detract from the existing landscape character and quality.
High effect	 'Something is great in amount, degree or intensity' 'Advanced or complex' 	 'Noticeable change to the existing character or distinctive features of the landscape or reduction in the perceived amenity or the addition of new but uncharacteristic features and elements². The proposal may form a visible or recognisable change/ new element within the

		wider landscape and maybe readily noticed by the viewer, detracting from the existing landscape character and quality.
Very high effect		 Major change to the existing character, distinctive features or quality of the landscape or a significant reduction in the perceived amenity of the outlook². The proposal will form a significant or immediately apparent change to the landscape, which significantly impacts the existing landscape character and quality.
Extreme effect	 'Something is very great in degree or intensity' 'Severe or unusual' 'Greatest degree possible' 	 Total loss of the existing character, distinctive features or quality of the landscape resulting in a complete change to the landscape or outlook².



RECORD OF TITLE UNDER LAND TRANSFER ACT 2017 FREEHOLD

Search Copy



R.W. Muir Registrar-General of Land

IdentifierOT17C/602Land Registration DistrictOtagoDate Issued03 September 1996

Prior References OTB2/611

Estate	Fee Simple
Area	16.0914 hectares more or less
Legal Description	Part Lot 1 Deposited Plan 18290
Registered Owners	

Registered Owners

Michael John Davies, Bridget Patricia Davies and Tony Jason Sycamore

Interests

831796 Transfer creating the following easements in gross - 14.6.1993 at 10.46 am

051790 Hanster eres	ating the following easeme	Ints III gross - 14.0.1775	at 10.40 ani			
Type Convey water	Servient Tenement Part Lot 1 Deposited Plan 18290 - herein Certificate specifying the f	Easement Area EH Transfer 831796	Grantee Arrow Irrigation Company Limited 9 1996 at 12 03 pm	Statutory Restriction		
		2	-			
Type Right of way	Servient Tenement Lot 1 Deposited Plan 25533 - CT OT17C/601	Easement Area A DP 25533	Dominant Tenement Part Lot 1 Deposited Plan 18290 - herein	Statutory Restriction Section 243 (a) Resource Management Act 1991		
915349.7 Transfer cr	reating the following easen	nents - 3.9.1996 at 12.03	3 pm			
Туре	Servient Tenement	Easement Area	Dominant Tenement	Statutory Restriction		
Draw and convey	Part Lot 1 Deposited	B DP 25533	Lot 1 Deposited Plan	Section 243 (a) Resource		
water	Plan 18290 - herein		25533 - CT OT17C/601	Management Act 1991		
Land Covenant in Ea	asement Instrument 602126	61.5 - 27.5.2004 at 9:00	am			
Land Covenant in Ea	asement Instrument 662652	29.3 - 28.10.2005 at 9:00	0 am			
Fencing Covenant in	n Transfer 7157449.2 - 12.1	12.2006 at 9:00 am				
Land Covenant in Easement Instrument 7157449.5 - 12.12.2006 at 9:00 am						
Land Covenant in Easement Instrument 7157449.6 - 12.12.2006 at 9:00 am						
Land Covenant in Easement Instrument 10607554.1 - 8.6.2017 at 5:11 pm						
Land Covenant in Easement Instrument 11041762.1 - 4.4.2018 at 4:10 pm						
Land Covenant in Ea	Land Covenant in Easement Instrument 11041762.2 - 4.4.2018 at 4:10 pm					





RECORD OF TITLE UNDER LAND TRANSFER ACT 2017 FREEHOLD

Search Copy



R.W. Muir Registrar-General of Land

IdentifierOT10D/416Land Registration DistrictOtagoDate Issued09 April 1987

Prior References OT76/238

EstateFee SimpleArea8.1305 hectares more or lessLegal DescriptionLot 2 Deposited Plan 18290Registered Owners

Michael John Davies, Bridget Patricia Davies and Tony Jason Sycamore

Interests

538672.5 Fencing Provision

Land Covenant in Easement Instrument 6021261.5 - 27.5.2004 at 9:00 am Land Covenant in Easement Instrument 6626529.3 - 28.10.2005 at 9:00 am Fencing Covenant in Transfer 7157449.2 - 12.12.2006 at 9:00 am Land Covenant in Easement Instrument 7157449.5 - 12.12.2006 at 9:00 am Land Covenant in Easement Instrument 7157449.6 - 12.12.2006 at 9:00 am Land Covenant in Easement Instrument 10607554.1 - 8.6.2017 at 5:11 pm Land Covenant in Easement Instrument 11041762.1 - 4.4.2018 at 4:10 pm Land Covenant in Easement Instrument 11041762.2 - 4.4.2018 at 4:10 pm

