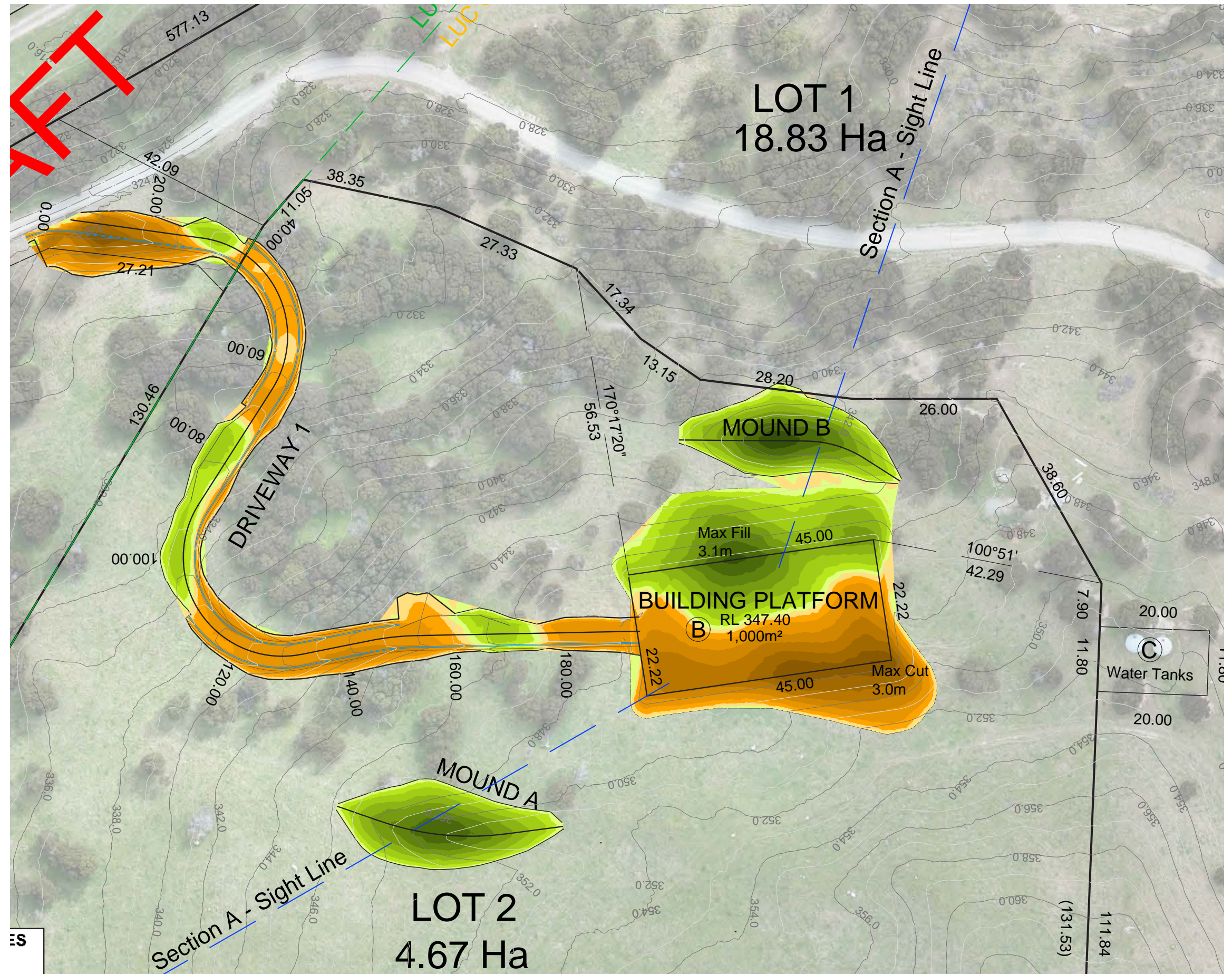
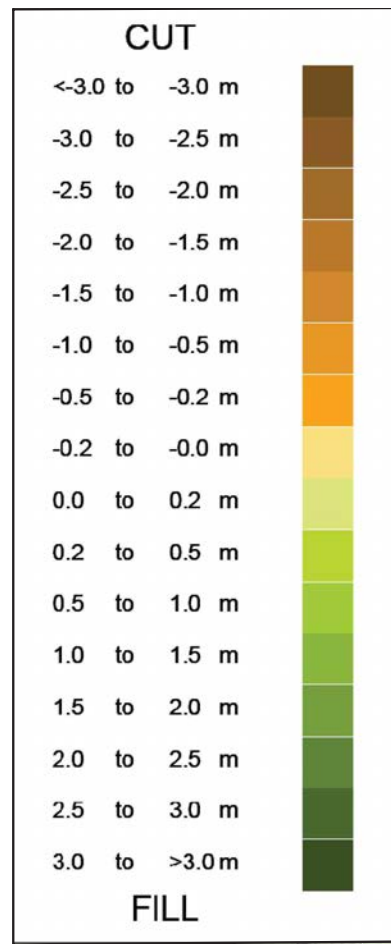


Earthworks plan



Scale 1:750 @ A3
Data Source: Southern Land

Proposed Landscape Mitigation Plan

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Legend

	Proposed Lot 2 building platform - 1000m ²
	Proposed curtilage area - 1044m ²
	Existing Lot 1 driveway + R.O.W
	Proposed Lot 2 access driveway
	Area of offset planting - 3500m ²
	Proposed Beech trees - 500m ²
	Proposed native shrubs - 900m ² - Kanuka <i>Kunzea ericoides</i> - Mingimingi <i>Coprosma propinqua</i> - Rohutu <i>Lophomyrtus obcordata</i>
	Existing contours (2m interval)
	Proposed mounding
	Existing water tanks
	Site boundary
	Lot boundary

Planting notes:

The Landscape Mitigation Plan shall be fully implemented prior to issue of S224 certificate.

Shrubs shall be planted at RT grade. Beech Trees on Lot 2 mounding shall be planted at 0.75m tall. All remaining Beech Trees shall be planted at 0.75m tall.

All mass planted areas of native shrubs and trees shall be fenced from rabbits with rabbit proof fencing no less than 900mm in height and be partially buried or secured along the ground for no less than 600mm depth / width.

All plants shall be planted with a slow release fertiliser All plants shall have bark mulch / pea straw or similar to retain moisture for each plant. All plants shall have pest protection sleeves installed.

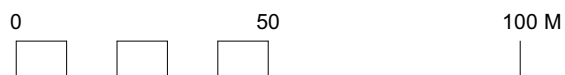
A temporary irrigation system shall be installed and operated for the first three years from the date of planting.

If any tree or plant shall die or become diseased it shall be replaced within 12 months as per the plant schedule, and any existing tree to be replaced must be with a grade no less than 1.5m in height.



Scale 1:1500 @ A3

Data Source: Southern Land



Landscape Mitigation Plan Plant Palette

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Native Shrubs & Trees



Tree Daisy
Olearia lineata
Height at 5 years: 1.5m
Height at 10 years: 2m



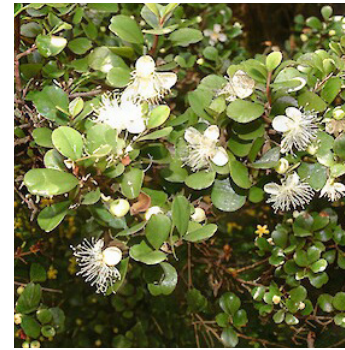
Native Broom
Carmichaelia australis
Height at 5 years: 2m
Height at 10 years: 3m



Koromiko
Hebe salicifolia
Height at 5 years: 1m
Height at 10 years: 2m



Kānuka
Kunzea ericoides
Height at 5 years: 2m
Height at 10 years: 4m



Rohutu
Lophomyrtus obcordata
Height at 5 years: 4m
Height at 10 years: 8m



Matagouri
Discaria toumatou
Height at 5 years: 2m
Height at 10 years: 5m



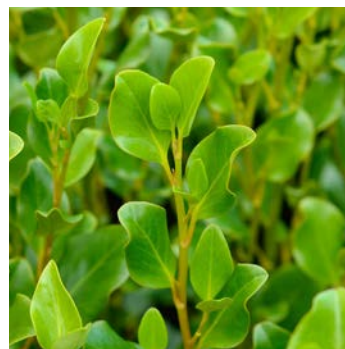
Porcupine shrub
Melicytus alpinus
Height at 5 years: 0.3m
Height at 10 years: 0.6m



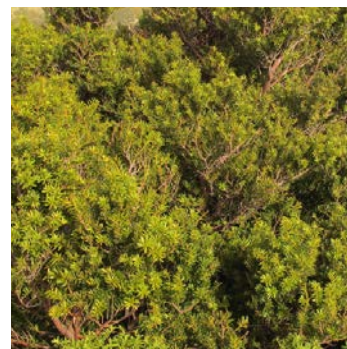
Mingimingi
Coprosma propinqua
Height at 5 years: 2m
Height at 10 years: 6m



Kohuhu
Pittosporum tenuifolium
Height at 5 years: 4m
Height at 10 years: 6m



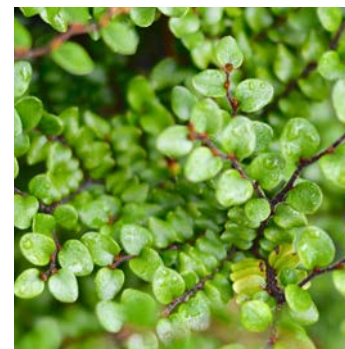
Broadleaf
Griselinia littoralis
Height at 5 years: 3m
Height at 10 years: 6m



Hall's Totara
Podocarpus laetus
Height at 5 years: 2m
Height at 10 years: 6m



Lancewood
Pseudopanax crassifolius
Height at 5 years: 2m
Height at 10 years: 10m



Mountain Beech
Fuscospora cliffortioides
Height at 5 years: 5m
Height at 10 years: 12m



Marbleleaf
Carpodetus serratus
Height at 5 years: 2m
Height at 10 years: 5m



Coprosma
Coprosma crassifolia
Height at 5 years: 1m
Height at 10 years: 2m



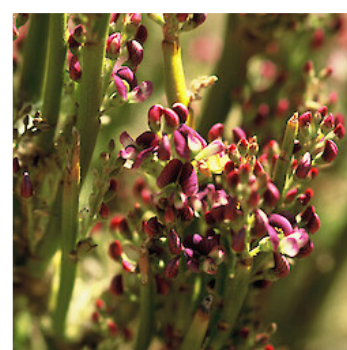
Weeping matipo
Myrsine divaricata
Height at 5 years: 1m
Height at 10 years: 2m



Wineberry
Aristotelia serrata
Height at 5 years: 2m
Height at 10 years: 4m





Three Finger
Pseudopanax colensoi
Height at 5 years: 2m
Height at 10 years: 4m



Native Broom
Carmichaelia petriei
Height at 5 years: 2m
Height at 10 years: 6m

Viewpoint Location Map

Legend

	The Site
	Viewpoint Locations

The photographs were taken between 10.00am and 6pm on the 19th April 2023, 2nd May 2024, 7th June 2024, 23th July 2024 and 5th August 2024.

Photos were captured on an Olympus OM-D E-M10 II Camera with a 25mm lens, (equivalent to a 50mm focal length) using the panorama function.

Panorama photos have been created from seven individual portrait photographs so they have a horizontal field of view of approximately 127 degrees. This captures the human eyes primary field of view.

Panorama photos were created in Adobe Photoshop, using the photomerge tool.



Scale 1:20,500 @ A3

Data Source: Grip Maps. NZ
Map date: 29 June 2022

Viewpoint Location Photographs

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Viewpoint 1: Located along Wānaka – Mount Aspiring Road, looking east toward the site and proposed Lot 2 building platform at a distance of 600m.



Viewpoint 2: Located at Roys Peak car parking area situated directly west of Wānaka – Mount Aspiring Road, looking east toward the site and proposed Lot 2 building platform at a distance of 1.0km.

Viewpoint Location Photographs

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Viewpoint 3: Located along Wānaka – Mount Aspiring Road, looking south toward the site and proposed Lot 2 building platform at a distance of 1.5kms.



Viewpoint 4: Located along Wānaka – Mount Aspiring Road, looking south toward the site and proposed Lot 2 building platform at a distance of 2.0kms.

Viewpoint Location Photographs

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Viewpoint 5: Located along the Roys Peak walking track, from an elevated location directly west of Wānaka - Mount Aspiring Road, looking east over the site and proposed Lot 2 building platform at a distance of 1.9kms.



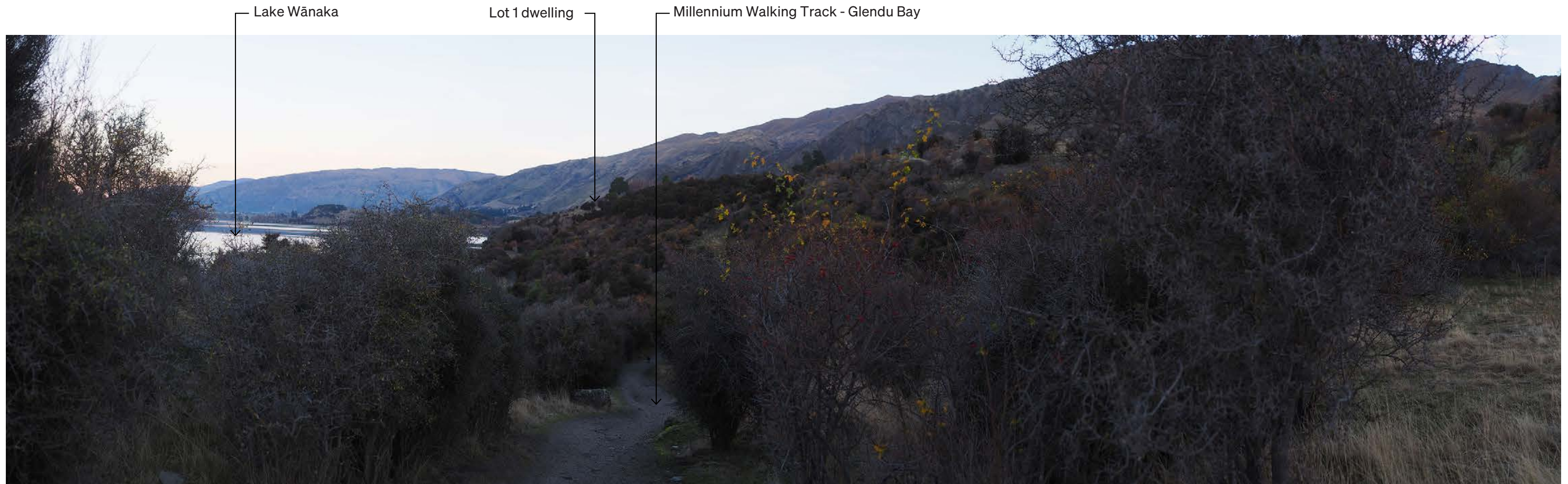
Viewpoint 6: Located along the Millennium Walking Track - Roys Peak Link, approximately 100m east of Wānaka-Mount Aspiring Road, looking east towards the site and proposed Lot 2 building platform at a distance of 550m. The existing driveway which provides access to Lot 1 is visible in the foreground, with the fenceline forming the northern boundary to the site.

Viewpoint Location Photographs

Application as Notified 283



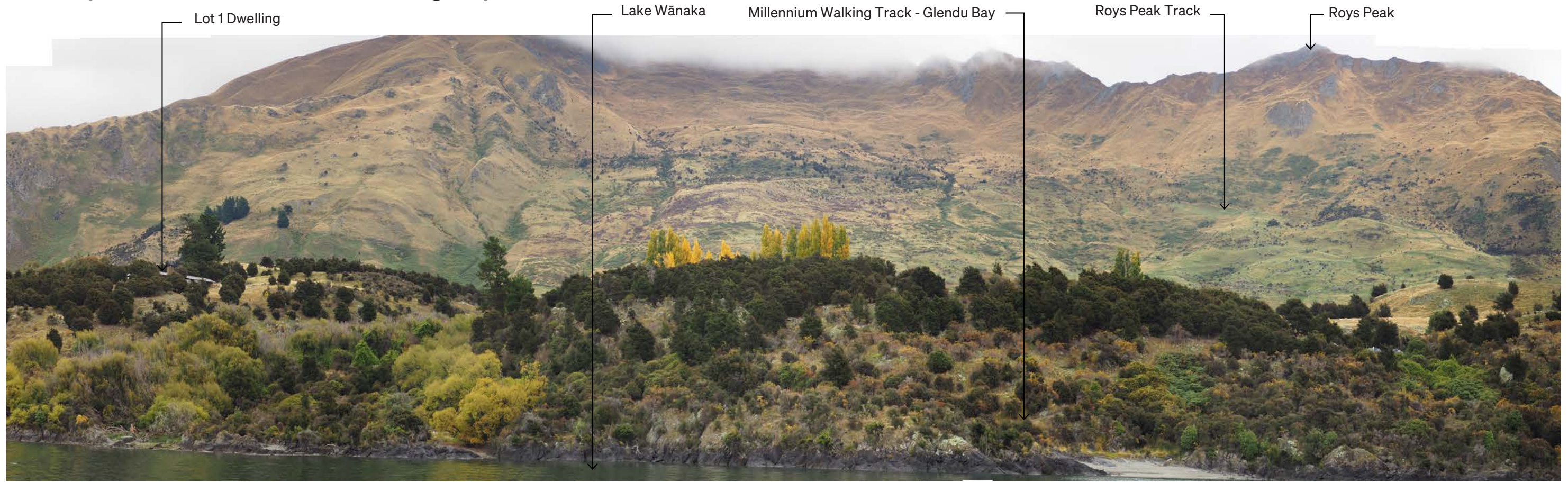
Viewpoint 7: Located along the Millennium Walking Track - Wānaka - Glendu Bay Track (Te Araroa Trail), at the high point of the track located at the base of Ironside Hill, looking south towards the site and proposed Lot 2 building platform at a distance of 1.25kms.



Viewpoint 8: Located along the Millennium Walking Track - Wānaka - Glendu Bay Track (Te Araroa Trail), at the high point of the track located at the base of Ironside Hill, looking south towards the site and proposed Lot 2 building platform at a distance of 750m.

Viewpoint Location Photographs

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Viewpoint 9: Located on the surface of Lake Wānaka, looking west towards the site and proposed Lot 2 building platform at a distance of 1.2kms.



Viewpoint 10: Located on the surface of Lake Wānaka, looking southwest towards the site and proposed Lot 2 building platform at a distance of 2.5km.

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RMML

12 July 2024

**REPORT ON NATIONAL POLICY STATEMENT FOR HIGHLY PRODUCTIVE LAND IN
RESPECT OF PROPOSED SUBDIVISION AT 538 WANAKA-MOUNT ASPIRING ROAD,
WANAKA**

The purpose of this document is to provide a Productive Capacity Assessment report for the proposed subdivision at 538 Wanaka – Mount Aspiring Road. The report specifically considers the proposal in terms of clause 3.8 (1 & 2) of the National Policy Statement for Highly Productive Land 2022 (NPS-HPL).

By way of background, I am currently the General Manager at Compass Agribusiness, a leading professional agribusiness firm in New Zealand. Compass and its experienced staff provide professional services to the Agribusiness sector for land based primary production. This involves engagement with clients modelling and evaluating their production system and providing solutions to ensure best (or alternative) practice is achieved to be sustainable from both an economic and environmental perspective in the future.

I have had a career spanning over 30 years working in agribusiness services and am a graduate of Lincoln University with a Diploma in Agriculture and Farm Management.

MY REPORT CONSIDERS THE FOLLOWING MATTERS:

- I. An overview of the land unit
- II. The current productive capacity of the land
- III. Mitigation of Clause 3.8 (1 & 2) of NPS-HPL
- IV. Consideration of Clause 3.10 (1) (b) of NPS-HPL
- V. Conclusion

I. SITE OVERVIEW

The land situated at 538 Wanaka – Mount Aspiring Road, Glendhu Bay, Wanaka 9382, appellation Section 6, Block XIII Lower Wanaka SD. The block encompasses an area of 23.504 hectares. This report is based on the current classification of the land as LUC 3 and LUC 6. The LUC 3 classified land is contained within the red outline in *Figure 1* below.



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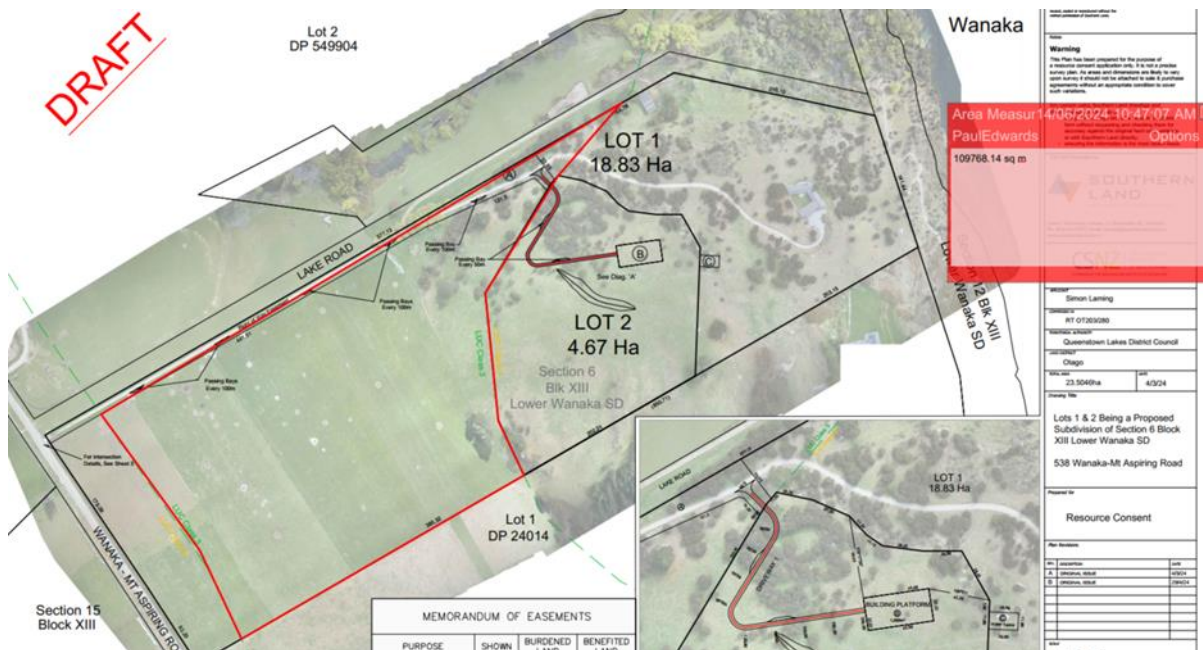


Figure 1

The Land Use Capability (LUC) classification is defined as a systemic arrangement of different types of land according to those properties that determine its capacity for long-term sustained production. Productive capacity depends largely on the physical qualities of the land, soil, and environment. (3rd Edition Land Use Capability Survey Handbook). The Land Use Capability (LUC) system was implemented in 1952 at a national level.

LUC Class mapping (which the NPS – HPL references to), is the broadest grouping of the capability classification. It is an assessment of the land’s capability for use, while taking into account its physical limitations and its versatility for sustained production. There are eight LUC classifications.

Based on mapping from OurEnvironment.scinfo.org.nz, the land use capability of the subject property is classed as LUC 3 and LUC 6.

OurEnvironment website legend describes the 2 subject property classifications as

- LUC 3 - Arable. Moderate limitations, restricting crop types and intensity of cultivation, suitable for cropping, viticulture, berry fruit, pastoralism, tree crops and forestry.
- LUC 6 - Non-arable. Slight to moderate limitations to pastoral use, suitable for pasture, tree crops and forestry and in some cases vineyards. Erosion is generally the dominant limitation.
-

For the purposes of this report, I have relied on the Southern Land Resource Consent map (*Appendix 1*).

The property consists of a developed irrigated area of 10.7 Ha (*Figure 2*), the remaining 12.7 Ha area (*Figure 3*) is essentially native - consisting of kanuka stands, some oversown and native grasses and considerable rabbit burrows and holes.





Figure 2



Figure 3



II. CURRENT PRODUCTIVE CAPACITY

From a productive modelling perspective, the unit would be classified as Class 6 – South Island Finishing Breeding – Otago-Southland.

Beef and Lamb NZ classify farms into 8 classes across New Zealand – they define South Island Finishing Breeding farms as “Farms which breed or trade finishing stock and may do some cash cropping. A proportion of stock may be sold store, especially from dryland farms. Carrying capacity ranges from 6 to 11 stock units per hectare on dryland farms and over 12 stock units per hectare on wetter or irrigated farms. Mainly in Canterbury and Otago, this is the dominant farm class in the South Island.”

Beef + Lamb New Zealand Sheep and Beef Farm Survey is a sample survey of over 9000 farms. The sample is randomly selected and stratified by geographical regions and by sheep and beef cattle stock units. Data associated with physical and financial aspects of sheep and beef farming are recorded.

Please note: The Sheep and Beef Farm Survey data and classification has no correlation to Land Use Capability (LUC) classification.

The NPS-HPL defines “Land Based Primary Production” as “production from agricultural, pastoral, horticultural or forest activities, that is reliant on the soil resource of the land.” The productivity has been modelled using the pastoral activity.

Figure 4 below sets out our calculations based on the entirety of the unit being available for land based primary production with a focus on a pastoral land use. Whilst the unit as a whole is compromised by a range of factors, such as the existing house and curtilage, kanuka stands etc – measuring the entire land unit area provides us with accurate baseline productivity values.

PRODUCTIVITY - CURRENT STATE 23.504 Ha			
Land Class	Area (hectares)	Feed Grown per hectare per year (kgDM/ha/yr)	Total Feed Grown (KgDM)
LUC 3 (Irrigated)	8.460	11,000	93,060
LUC 3 (Dryland)	2.495	3,255	8,121
LUC 6 (Irrigated)	2.320	11,000	25,520
LUC 6 (Dryland)	10.229	3,255	33,295
Total	23.504		159,997
Feed Utilisation		80%	127,997
Drystock assessed on a per stock unit basis 1 stock unit = consumes 550kgDM/annum			
Total assessed stock units			233
Farm Surplus (EBITDAR) / SU			\$35.11
Total Profit			\$8,170.88

Figure 4: Information sourced from Beef and Lamb NZ, ICL and Farmax



The table illustrates the amount of feed grown (kg Dry Matter / hectare/ year), utilization, stock unit carrying capacity and the average profit per stock unit (pre-tax). Average profit is total gross revenue less total farm expenditure (this includes working expenses, standing charges and depreciation)

A Stock unit in FARMAX is calculated by dividing the total intake in standard DM (10.8 MJME/kgDM) eaten by 550kgDM. This is the approximate annual feed requirement of a 55kg breeding ewe rearing a single lamb.

Based on the benchmark metrics, a profit of \$347.64 / hectare would be realised with a total profit of \$8,170.88. This assumes management by an average efficient farmer.

III. MITIGATION OF CLAUSE 3.8 (1 & 2) OF NPS-HPL

3.8 Avoiding subdivision of highly productive land

- (1) *Territorial authorities must avoid the subdivision of highly productive land unless one of the following applies to the subdivision, and the measures in subclause (2) are applied:*
 - (a) *the applicant demonstrates that the proposed lots will retain the overall productive capacity of the subject land over the long term:*
 - (b) *the subdivision is on specified Māori land:*
 - (c) *the subdivision is for specified infrastructure, or for defence facilities operated by the New Zealand Defence Force to meet its obligations under the Defence Act 1990, and there is a functional or operational need for the subdivision.*
- (2) *Territorial authorities must take measures to ensure that any subdivision of highly productive land:*
 - (a) *avoids if possible, or otherwise mitigates, any potential cumulative loss of the availability and productive capacity of highly productive land in their district; and*
 - (b) *avoids if possible, or otherwise mitigates, any actual or potential reverse sensitivity effects on surrounding land-based primary production activities.*

The proposed subdivision creates 2 lots, the south-western boundary line, dissecting Lot 1, and Lot 2 will follow LUC classification boundary line between the LUC 3 and LUC 6 land. (*Appendix 1*). From an NPS-HPL perspective there will be **NO** adverse impact on the LUC 3 land.

The existing right of way will be utilised and upgraded, creating passing bays along the existing route and minor earthworks at the entrance way to proposed Lot 2. (*Figure 5 below*)



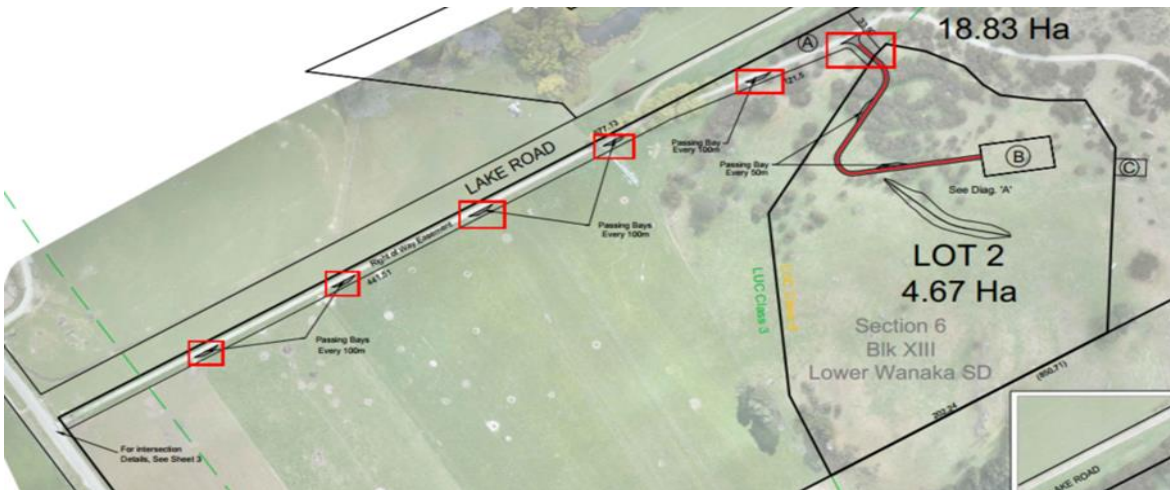


Figure 5.

Sam Lynds at Southern Land advises the creation of 4 passing bays @ ~100m² and the entrance upgrades will be about 50m². Totalling ~150m² of LUC 3 land.

I have upgraded the productivity model to include the reduction of ~150m² LUC 3 land. (Figure 5 below)

PRODUCTIVITY - PROPOSED STATE 23.504 Ha			
Land Class	Area (hectares)	Feed Grown per hectare per year (kgDM/ha/yr)	Total Feed Grown (KgDM)
LUC 3 (Irrigated)	8.450	11,000	92,950
LUC 3 (Irrigated) Passing Bays	0.010	0	0
LUC 3 (Dryland)	2.490	3,255	8,105
LUC 3 (Dryland) Entrance way	0.005	0	0
LUC 6 (Irrigated)	2.320	11,000	25,520
LUC 6 (Dryland)	10.229	3,255	33,295
Total	23.504		159,870
Feed Utilisation		80%	127,896
Drystock assessed on a per stock unit basis 1 stock unit = consumes 550kgDM/annum			
Total assessed stock units			233
Farm Surplus (EBITDAR) / SU			\$35.11
Total Profit			\$8,164.43

Figure 6.

The proposal has a negligible impact on the productive land area (LUC 3), total feed grown, stock units and profit as illustrated in Figure 7.



PRODUCTIVITY - COMPARISON 23.504 Ha				
State	Area (hectares)	Total Feed Grown (KgDM) 80 % Utilisation	Total Assessed Stock Units	Total Profit
Current	23.504	127,997	232.7	\$8,170.88
Proposed	23.489	127,896	232.5	\$8,164.43
Impact	0.015	101.02	0.184	\$ 6.45

Figure 7.

Please note:

The proposed development sites are contained within the current established fenced off driveway precinct. As referred to in the paragraph above Figure 4, our modelling has been based on the entire land area. As the driveway area is fenced off, it is in fact unproductive and was established decades before the NPS-HPL came into force on 17th October 2022.

All farm access tracks and driveways require regular maintenance, therefore in my opinion these minor works could be undertaken without triggering NPS-HPL.

MITIGATION

Dry Matter (DM) grown is the primary metric derived from productive capacity. The productive area of 538 Wanaka – Mount Aspiring Road has been developed to its potential with the introduction of reliable irrigation. Water is sourced directly from Lake Wanaka, with a take of 9 litres per second to a maximum take of 1,000,000 litres day. Reliability is 100%

The irrigated area comprises 10.780 hectares, this area comprises both LUC 6 (2.322 ha *Figure 8*) and LUC 3 land 8.458 Ha *Figure 9*).

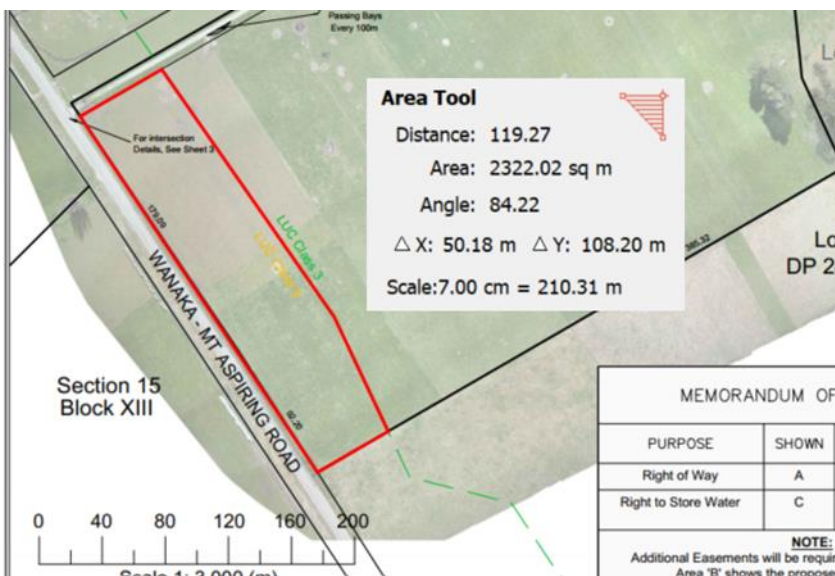


Figure 8.



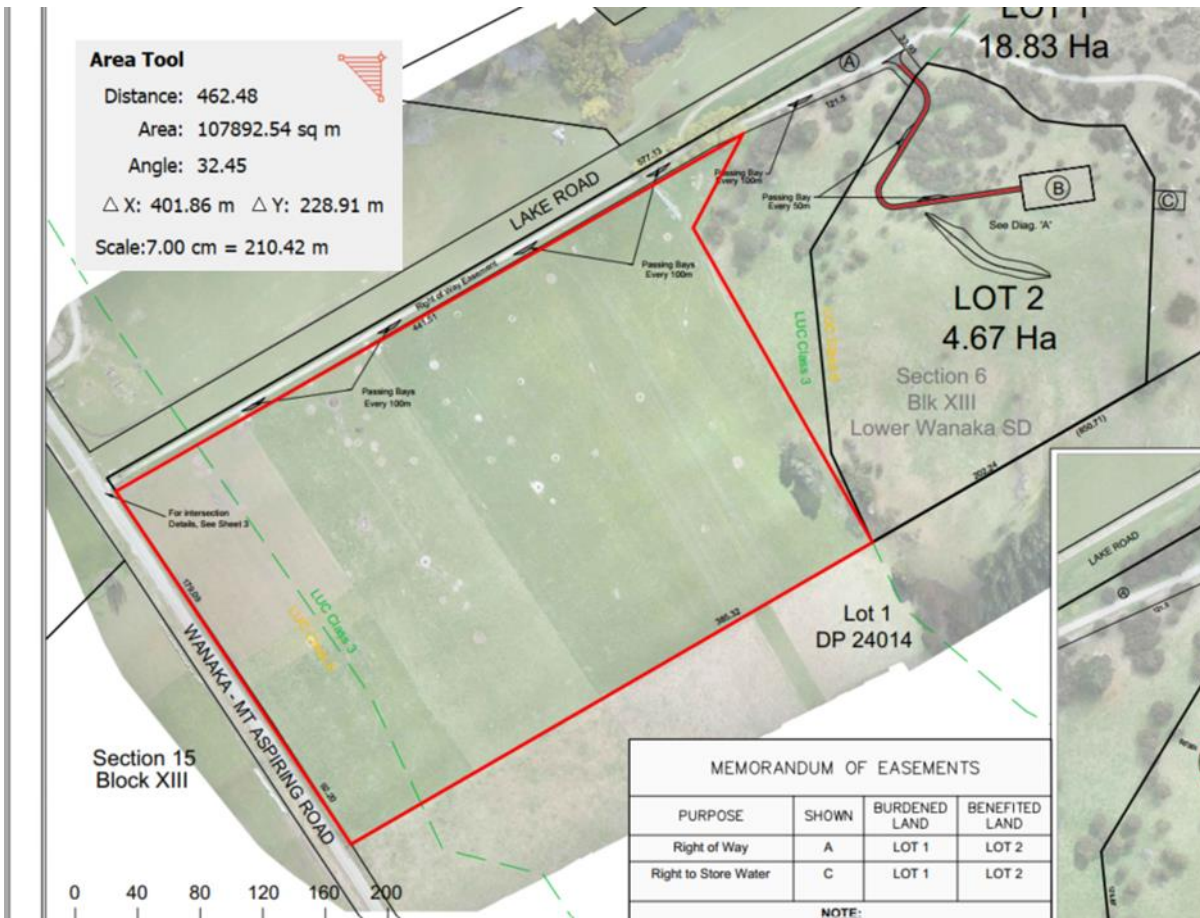


Figure 9.

The use of irrigation on 10.780 ha area has a significant effect on feed grown (+ 77,053 Kg DM), stock units (+ 140.1 SU) and total profit (+\$4,918.81). Figure 10 illustrates the productivity benefit of investing and utilising reliable irrigation on both LUC 3 and LUC 6 land compared to it being dryland.

IRRIGATION COMPARISON 10.780 Ha				
State	Area (hectares)	Total Feed Grown (KgDM) 80 % Utilisation	Total Assesed Stock Units	Total Profit
Irrigated	10.780	118,470	215.4	\$7,562.69
Dryland	10.780	41,417	75.3	\$2,643.89
Impact		77,053	140.1	\$ 4,918.81

Figure 10.



IV. CONSIDERATION OF CLAUSE 3.10 OF NPS-HPL

Clause 3.10 (1) (a) provides an exemption for territorial authorities for highly productive land subject to permanent or long-term constraints.

The LUC 3 land area contained within the block is 10.97 hectares, which in itself could be considered a long-term constraint due to being of an uneconomic size. The owner's primary income source is off farm which allows them to farm this block in its current state.

The owner has invested significantly in irrigation infrastructure, this investment increases the financial returns of the block from \$2,643.89 to \$7,562.69, an increase of 186%. This justifies the consideration that the block is uneconomic in size and a long-term constraint.

Clause 3.10 (b) states the territorial authority must be satisfied that the subdivision, use, or development.

- i. avoids any significant loss (either individually or cumulatively) of productive capacity of highly productive land in the district; and
- ii. avoids the fragmentation of large and geographically cohesive areas of highly productive land; and
- iii. avoids if possible, or otherwise mitigates, any potential reverse sensitivity effects on surrounding land-based primary production from the subdivision, use, or development.

The proposal satisfies 3.10 (b) (i) as outlined earlier in this report. The minor reduction in area is in fact on an accessway area of LUC 3 land that has been non-productive for many years. The vast majority of the LUC 3 land contained within the unit is irrigated, this has increased productive capacity significantly.

3.10 (b) (ii) is not applicable as the proposed subdivision is not on HPL. The HPL area contained in 538 Wanaka – Mount Aspiring Road is not affected, and when compared to immediately adjacent HPL areas, the current use has a greater productive capacity than neighbouring lots of HPL.

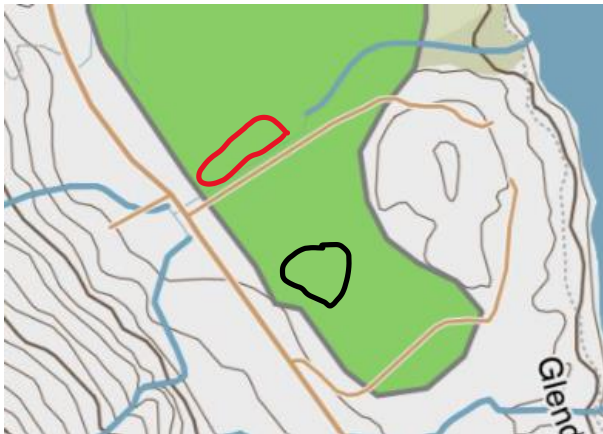


Figure 10

The block to the North is undeveloped with no irrigation (red area), the property to the South is planted in natives (black area) in Figure 10 and Google Earth image in Figure 11.





Figure 11

3.10 (b) (iii) again in my opinion any reverse sensitivity affects are not triggered due to the location of the proposed subdivision on non HPL. The surrounding land-based activities are similar to the existing current land use of 538 Wanaka – Mount Aspiring Road and the proposed future use.

CONCLUSION

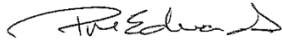
My independent assessment of 538 Wanaka – Mount Aspiring Road, Glendhu Bay, Wanaka 9382 in respect of the National Policy Statement for Highly Productive Land (NPS-HPL), provides an overview of the unit, the current productive capacity of the land and mitigating factors from the proposed subdivision in respect of Clause 3.8 (1 & 2) and consideration of clause 3.10 of NPS-HPL

The report illustrates the minuscule impact the proposed subdivision would have on the productive land area and productivity.

Conversely it demonstrates a substantive increase in productivity from the unit through the investment and efficient use of reliable irrigation.

If there are any queries, please do not hesitate to contact me.

Kind regards,



Paul Edwards

General Manager – Agribusiness Professional Services

Compass Agribusiness Management Limited

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PAUL EDWARDS | GM Agribusiness Professional Services

With a career spanning over three decades working in Agribusiness, Paul brings a wealth of expertise and skills to the Compass team.

Paul's 15 years of senior leadership roles at PGG Wrightson involved dispute resolution and mediation. This included grazing contracts, dairy forward contracts, large-scale valuations, and stock counts. Paul oversaw the Crafar Farm valuations to Landcorp. This spanned approximately twenty properties across the central North Island and included regular updates and final reports to the receiver. He was also called upon as an expert witness for subsequent animal welfare High Court trial.

A highly respected member of New Zealand's agribusiness community, Paul has a strong focus on succession, strategic and business planning for growth-oriented clients and thrives on working with clients to achieve better outcomes.

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ABOUT COMPASS AGRIBUSINESS

Compass is Australasia's leading professional services firm specialising in the Agribusiness sector. Our ambition is to improve the sustainability of agriculture for future generations.

We work in the capacity of a partnership with our clients, whether they be farm owners or investors in agriculture, to support them in achieving their personal, business, and sustainability objectives.

We tailor our services to each business we work with to improve all of their outcomes, and ultimately profitability. The outcomes of our client partnerships are a testament to the value we provide.





ENVIRONMENTAL MANAGEMENT PLAN

LAMING FAMILY TRUST
538 WANAKA-MT ASPIRING ROAD
RM240806

NOVEMBER 2024

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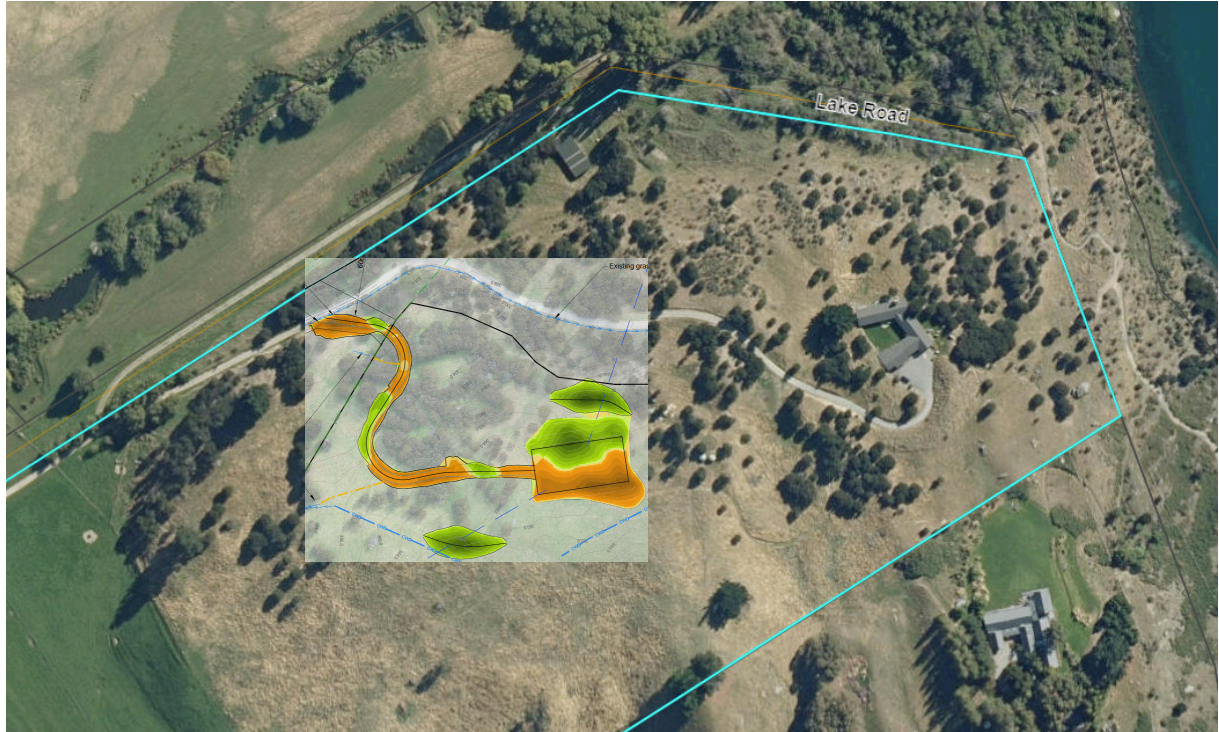
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DOCUMENT CONTROL

DATE	REV DESCRIPTION	AUTHOR
12/11/24	Original Rev A	Steve Hewland

GENERAL SITE AND PROJECT DESCRIPTION

This Environmental Management Plan (EMP) covers works 538 Wanaka-Mt Aspiring Road. The proposed development consists of earthworks to create an access, level building platform and two landscaping mounds. The earthworks site is on undulating ground with a south west aspect.



SQEP

This plan has been prepared by Steve Hewland, a SQEP as defined by QLDC's Guidelines for the Preparation of Environmental Management Plans June 2019.

Environmental Management Best Practice

Erosion and Sediment Controls for this project are designed, installed, maintained and decommissioned in accordance with the following principles:

- a) Erosion and sediment controls in accordance with GD05 "Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region 2016" are integrated with construction planning
- b) Effective and flexible erosion and sediment control plans are developed based on soil, site slope, weather, construction conditions and the receiving environment
- c) The extent and duration of soil exposure is minimised
- d) Water movement through the site is controlled – in particular clean water is diverted around the site and 'dirty' and 'clean' water is kept separated as far as practicably possible
- e) Soil erosion is minimised as far as reasonable and practical (to the satisfaction of QLDC)
- f) Disturbed areas are promptly stabilised
- g) Sediment retention on site is maximised (i.e. must meet the discharge criteria for suspended sediment in the Water Quality section below)
- h) Controls are maintained in proper working order, at all times

- i) The site is monitored and erosion and sediment practices adjusted to maintain the required
- j) performance standard, and
- k) Avoidance of discharges, especially sediment off site.

EMP Updates

This EMP will be reviewed when;

1. The construction program moves from one Stage to another; or
2. Any significant changes have been made to the construction methodology since the original plan was accepted for that Stage; or
3. There has been an Environmental Incident and investigations have found that the management measures are inadequate; or
4. Directed by QLDC's Monitoring and Enforcement team

Where undertaken, updates to the EMP will be submitted to QLDC for acceptance at RCMonitoring@qldc.govt.nz

Environmental roles and responsibilities

- Project Manager – Name and Contacts details TBC
 - Overall responsibility for the environmental management and implementation of this plan
 - Ensuring the EMP is updated as required
 - Ensuring appropriate training is given to all staff on environmental management and the implementation of this plan
 - Providing the resources necessary to implement this plan
 - Attend to Environmental Incidents and Complaints
- Environmental Representative – Name and Contacts details TBC

This role should actively support the project leadership (Project Manager and/or Supervisor) with the day-to-day implementation of environmental controls and administrative activities. In particular, the role involves:

 - Implementation of environmental management
 - Undertake EMP inductions
 - Ensure installation of environmental controls as per the ESCP and EMP
 - Undertake environmental site inspections of the project, as detailed below
 - Oversee the maintenance and improvement of defective environmental controls
 - Undertake Environmental Incident reporting
 - Keep project leadership informed of environmental performance of the project
 - Inform staff of procedures and constraints applicable to managing specific environmental issues
 - Responsible for providing environmental inductions to all staff and sub-contractors
 - Assist the project leadership in attending to Environmental Incidents and Complaints
- Environmental Advisor/Manager ('SQEP') Steve Hewland 021 942 099 steve@hewland.co.nz
 - Provide technical and onsite advice regarding this plan and implementation of the ESCP controls as required.

Site inspections

The Environmental Representative will undertake and document Weekly and Post-Rain Event site inspections using the checklist in Appendix 5 for the purpose of the following:

- This EMP is being followed.
- Review that the Erosion and sediment controls as described in the ESCP **Appendix 1** or subsequent revision are installed and working appropriately and identifying any necessary maintenance.
- Identifying any environmental incidents.
- Verifying preparedness for adverse weather conditions where significant rain and/or wind is forecast

The Environmental Representative will also undertake daily pre-start inspections to ensure that no new environmental issues have arisen, or mitigation measures have been compromised from the previous days work.

The Site Inspection records shall be made available to QLDC within 48 hours of a request being made.

Notification and management of environmental incidents

An environmental incident is anything where the EMP has failed leading to any adverse environmental effects offsite (including sediment and nuisance effects associated with dust as well as spills of fuels, chemicals and concrete to ground or a water body).

Concrete contamination is a serious issue so it is important the site manages concrete products and activities correctly and avoid a discharge to a waterbody or stormwater. Ensure concrete wash down does not enter any sediment device, stormwater network, or a waterbody. Cement wash water and cement-based products harm the environment because:

- They are strongly alkaline, due to their high lime content. This alkalinity can kill or burn aquatic life in much the same way an acid would.
- High sediment loads can smother and kill aquatic life living in the bed of a waterbody. It also scrapes and clogs fish gills.
- Sediment reduces sunlight penetration and makes it difficult for plants to get the energy they need to live and for aquatic life to find food.

If an incident occurs undertake immediate remedial actions to mitigate adverse environmental effects. Immediate response actions should not be delayed. Once the immediate risk from the Environmental Incident is alleviated, the Environmental Representative shall investigate the cause of the breach and/or adverse environmental effects, then identify and implement corrective actions as soon as practicable.

Call the ORC Compliance team and the pollution hotline immediately on 0800 800 033 for any incidents that cannot be brought under control, or for discharges of sediment, oil or chemicals to a waterbody, race or drain.

Take a lot of photos of the incident and immediate surrounds. Complete the form in **Appendix 3** (or the ORCs Environmental Incident Report form available on their website) and notify QLDC within 12 hours of becoming aware of the incident, also send the form to the Compliance team at Otago Regional Council at pollution@orc.govt.nz

Records and registers

Environmental records are collated onsite and can be made available to QLDC upon request. Records and registers to be managed onsite shall include the following:

- Environmental Induction attendance register (**Appendix 2**).
- Environmental Incident reports and associated corrective actions undertaken (**Appendix 3**).
- Complaints register and associated corrective actions undertaken (**Appendix 4**).
- Daily diary entries (including pre-start and post rain inspection observations).
- Weekly Inspections (**Appendix 5**).

Site induction

A site induction will be undertaken for all project staff. A copy of this is included in **Appendix 2**.

Cultural Heritage

This site is not a known cultural heritage site. Nevertheless, earthworks will be undertaken in accordance with the obligations of the *Heritage New Zealand Pouhere Tāonga Act, 2014* (HNZPTA). In the event of accidental discovery, the Accidental Discovery Protocol found in **Appendix 6** of this document will be followed.

Chemical and fuel management

The Contractor will ensure spill response equipment is available on the site for use in an emergency. Material Data Safety Sheets (MSDS) should be kept on site for all chemicals used and stored on site. Only appropriately trained personnel should use these chemicals. Spill response equipment will be commensurate with the site location, topographical features, type and quantity of chemicals and fuels being stored on site. As a minimum it should be able to isolate and contain oil from a hydraulic hose bursting. Such as;



All machinery associated with the earthworks activity must be operated in a way, which ensures that spillages of hazardous substances such as fuel, oil, grout, concrete products and any other contaminants are prevented.

Refuelling of machinery will conform to the following requirements:

- a) Occur at least 30m from a waterway
- b) Fuelling activity to be supervised at all times
- c) Hoses to be fitted with a stop valve at the nozzle end, ideally at an appropriately bunded or at designated laydown and hardstand area.

Chemicals and fuels exceeding 250 litres on site at any one time are expected to be nil.

Dust Management

The wind speed over the summer in Wanaka is generally between 10 and 15 km/hr from a north, northwest, or westerly direction according to <https://weatherspark.com/y/144793/Average-Weather-in-Arrowtown-New-Zealand-Year-Round#Sections-Wind>.

There is potential for dust to be generated by excavation, truck un/loading, vehicle movements, stockpiles, and compaction activities and this should not leave the boundaries of the site, in particular the residential neighbour to the south could be affected. The contractor will be vigilant with the regard to the risk of dust generation and the following mitigation measured are proposed:

- Only exposing the minimal areas require to complete the tasks.
- Use water to dampen surfaces that could generate dust in windy conditions.
- When visible amounts of dust are leaving the site, works are to cease and dust mitigation via surface spraying is to take place immediately.
- During periods of high winds, vehicle movements and construction activities may need to be reduced or suspended to minimise potential dust nuisance. Sequence operations to account for wind changes during the day. Scale back operations to an area that can be controlled for dust when conditions are windy.
- Re-topsoil finished areas as soon as possible and re-grass. Where appropriate, straw mulch will be applied to promote grass seed germination or as temporary stabilisation. Temporary stockpiles will be suitably sealed off and stabilised as material is placed.

If any complaints are received record in the Complaints Register in Appendix 4 and follow the incident response process Appendix 3.

Waste management

There is not expected to be any significant amount of vegetation waste from clearing and stripping and there is no construction activity so there will be no waste to manage.

Noise Management

The nearest neighbour is approximately 200m away so there is low risk of noise being a nuisance. Noise will be generated from the earthworks machinery. Rock is expected at 2.1-2.6m bgl so may be encountered in the deepest area of building platform excavation. Levels are to be monitored if a complaint is received, and if there is a non-compliance mitigation and management measures are to be implemented and recorded in the Complaints Register (Appendix 4).

Hours of work will be constrained in accordance with the resource consent conditions to be confirmed.

Requirements for the discovery of contaminated land

If unexpected contamination is discovered by sight or odour during excavation or by land disturbance works, the Contractor will:

- Cease all earthworks in the area of the contamination immediately.
- Notify **ORC** within **24 hours** of the discovery.
- Employ an SQEP with specific contaminated land expertise (CL-SQEP) to perform an assessment of the discovery.

Appropriate remediation and/or disposal options for the discovered contaminated soils must occur, including notifying ORC and outlining and following an Accidental Discovery Procedure. This may require the engagement of a CL-SQEP if contaminated material is discovered.

Works in the area affected by contamination can only recommence once any required consents are obtained. Additional consent(s) may be required if material other than cleanfill is proposed to be used on site. Further information can be obtained from ORC by emailing public.enquiries@orc.govt.nz.

Erosion and Sediment Control Plan

Geotechnical Summary

A geotechnical assessment has been completed by Geosolve Ltd, reference 230197 and dated 12/06/2024. This report details site investigations and reports on the geotechnical conditions. Key relevant findings include;

- The subsurface stratigraphy observed during the building platform investigations typically comprises:
 - *0.1-0.3 m of topsoil, overlying;*
 - *0.6-1.1 m of colluvium, overlying;*
 - *1.1-1.9 m of glacial till, overlying;*
 - *0.1 m + of schist bedrock.*
- Soakage rates due to glacial till are low at 14mm/hr.

Earthworks Summary

Earthworks is required for the construction of a driveway approximately 200m long with gradients up to 16% or 1:6, and the preparation of a level building platform with two landscaping mounds. The maximum cut depth is the southwest corner of the building platform at 2.5m, and there is up to 3m of fill at the front of the platform and to create the 2 landscaping mounds. There is up to 1m of cut and fill for the driveway construction. No fill will be carted off site with the landscaping mounds being shaped with the excess fill from the road and building platform earthworks.