Queenstown Lakes District Council

Proposed District Plan Stage 2 - Submission

Clause 6 of First Schedule, Resource Management Act 1991
FORM 2

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For office use only **Submission No:**
Receipt Date:

1. Submitter details:

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2. Scope of submission

2.1 This is a submission to the Queenstown Lakes District Proposed District Plan (PDP) Stage 2, notified 23 November 2017

2.2 The scope of this submission is detailed below and in Part 3 of the submission.

2.3 The specific provisions that my submission relates to are:

(a) Proposed Planning maps and the location of the Wakatipu Basin Rural Amenity Zone (**WBRAZ**).

(b) Chapter 24 – Wakatipu Basin

(c) Chapter 45 – Special Zones

(d) Chapter 25 – Earthworks

(e) Chapter 6 – Variation to Stage 1 Landscapes – Rule 6.4.1.3

(f) Chapters 3 and 6 (Stage 1)

(g) Any other provisions relevant to the purpose of this submission described in Parts 3 – 6 below.

3. Planning Maps 13d, 26 and 30, and the Wakatipu Basin Rural Amenity Zone

3.1 Summary and purpose of the submission

The submission seeks to modify the PDP to include a planning framework that enables more diverse, non-farming uses of the 130ha block of land located between State

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Highway 6, McDonnell Road, Hogan Gully Road and the Bendemeer Special zone. Traditional farming of the block is not economically viable, and other uses would be more economically and environmentally sustainable. Based on the land's location within the Wakatipu Basin, its size, its varied topography and aspect, and its varied visibility (and invisibility) when viewed from adjoining roads and properties, there are opportunities for a range of activities that require a rural location. These are:

- Outdoor commercial recreation including golf, with facilities including club house, service and maintenance, and a driving range; and
- Associated residential and visitor accommodation activities.

These activities can be undertaken with significant environmental benefits, for example through wetland restoration and rehabilitation, and setting aside landscape protection areas.

To provide for these opportunities, various modifications should be made to the PDP, in addition to changes sought in Stage 1 (including Strategic Direction (Chapter 3), Landscapes (Chapter 6), Rural (Chapter 21), and Subdivision (Chapter 27)). The modifications sought in this submission include deleting the Wakatipu Basin Rural Amenity Zone (**WBRAZ**) from the property and:

- Rezoning the land as a special zone; or
- In the alternative, including the upper plateau land in the Wakatipu Basin Lifestyle Precinct (**WBLP**) (or equivalent, including the rural living zones from the PDP Stage 1); or
- In the second alternative, modifying the WBRAZ provisions so that subdivision of the HGF land to create rural residential and residential lots, associated with golf course activities, is a discretionary activity

HGF considers that rezoning the land as a special zone is the option which will best achieve the purpose of the Act.

3.2 Planning maps 13d, 26 and 30

HGF **OPPOSES** the inclusion of the land between State Highway 6, McDonnell Road, Hogan Gully Road and the Bendemeer Special zone in the WBRAZ as shown on Planning Maps 13d, 26 and 27 and seeks alternative zonings as described below.

3.3 The reasoning for the submission is:

(a) The land has varied topography and degrees of visibility when viewed from outside the site and has significant potential for further development that can be located and designed in a manner that does not adversely affect the landscape and visual amenity values of the land or of the wider surrounding environment.

(c) This potential for additional, appropriate development is reflected in the notified Chapter 24's Landscape Classification Unit 15 (Hogans Gully) (**LCU15**). This describes the potential landscape opportunities and benefits associated with additional development as:

- *Integration potential of landform pattern.*
- *Riparian restoration potential.*
- *Larger-scaled lots suggest potential for subdivision.*

- *Relatively visually discreet nature of the majority of the unit (due to landform and to a lesser degree, vegetation patterns).*
- *Potential to integrate walkways/cycleways.*

In LCU15, the environmental characteristics and visual amenity values to be maintained and enhanced include:

- *Buildings integrated by landform and vegetation.*
- *Retention of hummock landform pattern.*
- *Reinforcement of landform patterning via gully / stream plantings.*

Based on this assessment, the notified Chapter 24 rates the LCU15's capability to absorb additional development as "Moderate".

(d) The "Moderate" development absorption capacity rating applies to only two other parts of the Wakatipu Basin. One of these is the Millbrook Resort Zone (Chapter 43) area, that contains golf courses and large areas of development that is urban in scale and character. The Millbrook Zone is not included in the notified Wakatipu Basin Zone. The other Moderate area is The Hills land (LCU22) which contains golf courses and related activities and facilities, and several dwellings.

(e) The LCU15 area with its "Moderate" development absorption capacity rating is considerably different to many other areas in the Basin. In particular, it is different to many of the areas that have a "Moderate-Low", "Low" and "Very Low" absorption capacity rating. The differences are in the respective areas' topographical features, degree of visibility when viewed from other areas, proximity to outstanding natural landscapes or features, and overall degree of absorption capability.

(f) Despite the many and very obvious differences in their characters, all of the land within the "Moderate", "Moderate-Low", "Low" and "Very Low" categories are subject to exactly the same WBRAZ objectives, policies and rules. Most notably, this includes the rules that provide for minimum lot sizes for subdivision in the WBRAZ.

(g) This "blanket" approach to subdivision, and subsequent development, is inconsistent with the higher order objectives and policies of the PDP in that some areas, including the Hogans Gully land under LCU15, can comfortably absorb well-located and designed subdivision and development that is entirely consistent with all the objectives and policies in 24.2.1 – 24.2.4. Such development would be a significantly greater density than the blanket 1 dwelling per 80ha minimum proposed in the notified Chapter 24.

3.4 HGF submits that:

(a) Given the "Moderate" development absorption capacity rating, the WBRAZ zoning of the Hogans Gully land should be deleted and replaced with a more appropriate, bespoke zoning that recognises the existing physical resources of the golf courses and related buildings and activities, the existing dwellings and associated rural living activities, the existing consents, and the area's natural resources that include some areas that are topographically confined and where greater development is able to be easily absorbed.

The bespoke **Hogans Gully Special Zone** provisions, including an objective, policies, rules and a bespoke Structure Plan, are set out in **Part 4** below, along with supporting expert reports and section 32 evaluation.

(b) In the alternative, if the Special Zone is not accepted, areas within the Hogans Gully land that are suitable for development, within the upper terrace of the land, should be included within the WBLP, with an average subdivision lot size area of 2500m^2

The modifications necessary for this relief are set out in **Part 5** below.

(iii) In the second alternative, if the Hogans Gully land remains in the WBRAZ, the WBRAZ objectives, policies and rules should be modified so that areas with the "Moderate" LCU development absorption capacity are subject to a discretionary regime for subdivision, akin to the legacy Rural General Zone's discretionary regime and using the LCU15 provisions as part of the assessment of new subdivision proposals. This discretionary regime would not be subject to a minimum lot size and would replace the notified Chapter 24 subdivision regime of 1 lot per 80ha minimum lot size (with non-complying status for breach).

The modifications necessary for this relief are set out in **Part 6** below.

4. The Hogans Gully Zone – inclusion of new special zone in Chapter 45

4.1 Planning Maps 13d, 26 and 30

Delete the WBRAZ zoning of the land and replace with the Special Zone, as shown on **Figure 1**, **Figure 2** and **Figure 3** attached.

4.2 Chapter 46 – Hogans Gully Special Zone

(a) Add a new special zone as "**Chapter 45: Hogans Gully Zone**" in **Annexure A** (including objective, policies, rules and structure plan);

(b) In summary, the Hogans Gully Special Zone provides for a golf course and related resort activities and facilities, including, notably:

(i) Golf course, practice green, and provision for a driving range

(ii) Golf club house, with restaurant, café, and associated commercial activities;

(iii) Maintenance facilities;

(iv) Residential / visitor accommodation units in clusters, nestled into the landscape in the higher plateau areas and not visible from either McDonnell Road (i.e. the Arrowtown – Arrow Junction road), Hogans Gully Road, or the state highway;

(v) Ecological habitat restoration and enhancement, including wetland enhancement; and

(vi) Amenity landscaping.

(c) The activities and facilities are to be in accordance with a Structure Plan that provides for activity areas for different land uses, access, landscaping areas etc;

(d) The proposed Hogans Gully Zone will achieve the purpose of the Act and the overarching objectives of the Plan through well located and designed development;

(e) The Hogans Gully Zone is supported by the following reports:

Annexure B: Hogans Gully Special Zone - Section 32 Evaluation Report, prepared by Brown & Company Group, dated 23 February 2018;

Annexure C: Proposed Structure Plan, prepared by Baxter Design Group, dated 8 February 2018;

Annexure D: Golf Concept Masterplan, prepared by Baxter Design Group, dated 21 February 2018;

Annexure E: Landscape Assessment, prepared by Baxter Design Group, dated 23 October 2015;

Annexure F: Transport Assessment, prepared by Bartlett Consulting, dated October 2015;

Annexure G: Preliminary and Site Investigation, prepared by e3 Scientific, dated 5 December 2017;

Annexure H: Infrastructure Report, prepared by Holmes Consulting, dated October 2015;

Annexure I: Geotechnical assessment, prepared by Geosolve, dated December 2017;

Annexure J: Ecological Review, prepared by Davis Consulting Limited, dated 22 October 2015;

Annexure K: Property Report, prepared by APL Property Queenstown Ltd, dated 1 October 2015.

5. Alternative relief: apply the Wakatipu Basin Lifestyle Precinct in the upper plateau area of the Hogans Gully land

5.1 Planning Maps 13d and 26

Apply the WBLP zoning, as shown on **Figure 4** and **Figure 5** attached:

The reasons for the submission are:

(a) As alternate relief to the relief sought in Part 4 above, HGF seeks to insert the WBLP Zone to the parts of the land with greater potential to absorb development, being the upper plateau areas.

(b) The minimum lot size for the WBLP in this area, under Rule 27.5.1, should be average 2000m^2. Dwellings should be grouped in the area of the zone that is most appropriate for development. A structure plan will show these areas, as well as the area for ecological protection and enhancement and areas protected for farming purposes.

5.2 Modifications to the WBLP

5.2.1 Modify Table 24.2 as follows:

Table 24.2	Activities in the Wakatipu Basin Lifestyle Precinct	Activity Status
…		

24.4.25	The construction of new residential buildings and the exterior alteration to existing buildings located within an existing approved/registered building platform area. Control is restricted to: • Building scale and form. • External appearance including materials and colours. • Accessways. • Servicing and site works including earthworks. • Retaining structures. • Infrastructure (e.g. water tanks). • Fencing and gates. • External lighting. • Landform modification, landscaping and planting (existing and proposed). • Natural hazards. Excludes farm buildings as provided for in Rule 24.4.8	C
24.2.26	The construction of new residential buildings not located within an existing approved/registered building platform area	NC
[*renumber accordingly*]	**…**	

The reasons for the modification are:

(a) Where a residential building platform (**RBP**) has previously been approved, the likely effects of a future dwelling on the new lot will have been assessed. The location and effects of a future dwelling, along with other associated works such as access and landscaping, will have been sufficiently apparent, at the time of approval, to allow certainty of the right for a future dwelling and to preclude any need for Council discretion to refuse an application for a dwelling[1];

(c) The Restricted Discretionary Activity (**RDA**) status for a dwelling within a RBP creates too much uncertainty for property owners and is unnecessary, particularly so in the WBLP because the purpose of the WBLP is to create lots for rural residential purposes;

(d) The Controlled activity status is more appropriate because it provides certainty for landowners while still allowing the Council to manage the effects of a dwelling within the RBP, and associated works, through imposing conditions in relation to the matters of control, as set out in the rule;

(e) The planning method of creating a RBP at the time of the discretionary activity / restricted discretionary subdivision, with controlled activity status for subsequent buildings within the RBP, is well-established in the District, and there is no evidence or section 32 evaluation suggesting that the method has generated adverse effects and is inappropriate;

(f) The default status of non-complying is appropriate for any proposed building not located within an existing approved/registered building platform area because it sets clear guidance on the expected density of dwellings in the WBLP and enables rigorous assessment of the effects of any building not within the RBP.

[1] Provided other appropriate development standards are met

5.2.2 Part 24.5: Rules – Standards – Table 24.3

Modify Table 24.3 as follows:

	Table 24.3 – Standards	Non-compliance Status
24.5.1	**Building coverage** **Building coverage** The maximum building coverage for all buildings shall be: **For lots 4000m² or greater:** 15% of lot area, or ~~500~~ **1000m²** ~~gross floor area~~ whichever is the lesser. **For lots less than 4000m²: 25% of lot area**	RD
…		
~~24.5.15~~	~~**Residential visitor accommodation**~~ ~~The commercial letting of one residential unit or residential flat per site for up to 3 lets not exceeding a cumulative total of 28 nights per 12 month period~~	~~D~~

The reasons for the modification are:

(i) The reference to "gross floor area" (GFA) is redundant as the rule is targeting a limit on building footprint, not GFA;

(ii) The maximum allowed size of a RBP is 1000m² so this should be the maximum coverage, including dwelling and accessory buildings, or 15% of lot area, for lots larger than 4000m². The effects of the location of these buildings within the RBP will have been addressed at the time of subdivision, and there is no further need to address effects of the location of the building;

(iii) For lots smaller than 4000m², 15% coverage may be too small to comfortably accommodate a dwelling and accessory buildings, therefore a 25% coverage limit is proposed.

(b) In relation to Rule 24.5.15:

(i) The rule should be deleted because the rule is a significant market intervention without environmental justification;

(ii) The notified provisions are a significant and unjustified intervention into the residential and visitor accommodation market in the District;

(iii) The information relied upon in the s32 justification for the visitor accommodation variation states that a significant number of listings (such as in Airbnb) comprise properties that are likely to be used "exclusively" for VA purposes[2]. This is not justified. Most owners, and/or their family and friends, would use the properties even if only occasionally for short term stays. Many use their properties frequently as a second home and prefer the convenience of letting their homes for short term VA while they are absent.

(iv) There is no evidence to suggest that the rules will result in home owners leasing their properties to long term tenants.

[2] See para 6.19 of the s32 dated 2 November 2017

(v) The proposed rule ignores the fact that many owners prefer short term VA rentals rather than long term open leasing because:

- It allows the owner(s) and/or their families and friends the freedom to stay at their property whenever they wish by temporarily taking the property out of the VA "pool". This freedom is in most cases not available to the owners if the property is leased to long term tenants; and
- The financial rewards are likely to be higher from short term VA leasing; and
- Short term VA leasing is usually accompanied by property up-keep and regular cleaning, which is not always guaranteed if the property is occupied by long term tenants.

(vi) The ability to enable short term VA leasing assists the District in fulfilling its continued and growing demand for VA accommodation, especially for families and other groups of more than 2 people who may not be able to afford multiple hotel or motel rooms, who do not wish to stay at a backpacker operation, and who would prefer the comforts of a home during their stay.

(vii) There is no evidence that short term VA leasing will cause greater adverse effects on residential amenity than long term rentals. For example, the District has by nature a large "transient" or seasonal sector of the population. Long term tenants will include late shift workers (restaurants, bars, hotel staff) who arrive home very late at night, which can disrupt residential amenity on a more regular basis than short term VA tenants.

(viii) There is little difference between the "permanent" effects of the use of a property by long term tenants than the less frequent, temporary effects of the use by short term VA tenants.

(ix) The natural attributes and economy of the District are such that the District has high numbers of holiday homes, high numbers of short term visitors, and high numbers of transient workers in tourism-related industries. The juxtaposition of all of these has created the circumstances where short term VA leasing of private residences is practicable, viable and necessary. Intervention into this aspect of the economy is perilous, and other methods of increasing housing availability and reducing affordability should be contemplated on a wider basis rather than through the mechanisms proposed in the Variation.

(x) The section 32 evaluation identifies that only 2.2% of the visitor accommodation is provided in rural areas, and therefore the alleged adverse impacts on residential cohesion and character are not relevant in the rural areas;

(xi) For these reasons the Submitter considers that, in the WBRAZ and WBLP, the standards for Residential Visitor Accommodation should not apply and should be deleted.

5.2.3 Rule 24.7: Assessment matters – Restricted Discretionary Activities

Modify the rule as follows:

24.7 Assessment Matters – Controlled and Restricted Discretionary Activities

24.7.1 In considering whether or not to grant consent **and/**or **to** impose conditions on a resource consent, regard shall be had to the assessment matters set out at 24.7.3 to 24.7.13.

24.7.2 All proposals for restricted discretionary activities will also be assessed as to whether they are consistent with the relevant objectives and policies for ~~the Zone or Precinct as well as those in Chapters 3 Strategic Direction; Chapter 4- Urban Development, Chapter 6 Landscapes and~~ Chapter 28- Natural Hazards.

The reason for the modification to 24.7.1 is: the modification is a consequential amendment arising from the submission in 6.2.2 above, in relation to the status of dwellings within a RBP.

The reason for the modification to 24.7.2 is: it is inappropriate to require assessment of an RDA against the higher order objectives and policies of the Plan, as this opens up the discretion to practically any matter, rather than restricting it to the matters for which the rule is designed. The costs to the applicant and the Council of requiring such an assessment would be unreasonably high. The only reasonably exception is the provisions for natural hazards.

5.2.4 Rule 24.7.3 Assessment matters

Modify Rule 24.7.3 as follows:

	Assessment matters
24.7.3	New buildings (and alterations of existing buildings) **within a residential building platform**, residential flat, building coverage and building height infringements: **Landscape and visual amenity** a. Whether the ~~**location,**~~ form, scale, design and finished materials including colours of the building(s) adequately responds to the identified landscape character and visual amenity qualities of the landscape character units set out in Schedule 24.8 and the criteria set out below. b. The extent to which the ~~**location and**~~ design of buildings and ancillary elements and the landscape treatment complement the existing landscape character and visual amenity values, including consideration of: … • Design~~,~~ **and** size ~~**and location**~~ of accessory buildings …
…	

The reason for the submission is that the location of buildings will have been addressed at the time of subdivision

5.3 Variation to Stage 1 Subdivision and Development Chapter 27

5.3.1 Rule 27.5.1

Modify Rule 27.5.1 as follows:

Zone		Minimum Lot Area
Rural	…	
	Wakatipu Basin Lifestyle Precinct	**…** **In the Hogans Gully area: average 2000m^2**

The reasons for the opposition and the modification are as follows:

(a) The reasons set out in 3.2.1 above;

(b) The site has varied topography and features which collectively enable an innovative subdivision response that takes into account:

- the topography;
- views;
- neighbouring properties and their various land uses;

Such a subdivision response would potentially:

- include large areas of open space, to contribute to pastoral uses and amenity, with smaller lots around these open space areas; and
- include sufficient open space buffers at the periphery of the site to provide for amenity values for neighbouring landowners and as a buffer to potential future development on neighbouring lots.

(d) The rigidity of the 6000m^2 / 1ha average subdivision configuration, and the non-complying status for breaching these minima, would inhibit such an innovative design approach and would likely lead to an inferior environmental outcome, for the future lot owners and neighbours, and those viewing the development from a distance (i.e. from Crown Range Road);

(e) The 6000m^2 / 1ha average rules are contrary to the various provisions seeking flexible and innovative subdivision design, for example:

- Policy 24.2.5.2: "*Promote design-led and innovative patterns of subdivision and development* …";
- Assessment matters for subdivision, such as Rule 27.7.6.2(f): "*Whether clustering of future buildings would offer a better solution for maintaining a sense of openness and spaciousness, or the integration of development with existing landform and vegetation patterns*."

(f) For the Hogans Gully area, a 2000m^2 average lot size is appropriate as it allows an appropriate site size and density for the topography, taking into account the lack of visibility when viewed from the roads surrounding the property, the large setback of the WBLP zone from the roads, and neighbouring amenities.

6. Alternative relief: if the zoning remains WBRAZ, apply a discretionary activity regime with no minimum lot size for subdivision in the LCU areas with "Moderate" development absorption capacity, and further modify the WBRAZ

6.1 Planning Maps 26 and 27

Apply a hatch or other similar notation outlining the LCU15, with a label "Moderate Development Absorption Capacity" in the legend;

6.2 Chapter 24: Wakatipu Basin

6.2.1 Part 24.2 – Objectives and policies

Insert a new objective and policies that, for the areas marked "Moderate Development Absorption Capacity" on the planning maps, exempt the areas from the subdivision minimum lot size for the WBRAZ in Chapter 27, Rule 27.5.1; and provide for subdivision as a discretionary activity

6.2.2 Part 24.4 – Rules

Modify Table 24.1 as follows:

Table 24.1	Activities in the Wakatipu Basin Rural Amenity Zone	Activity Status
…		
24.4.1	Any activity not listed in Tables 24.1 to 24.3	~~NC~~ **D**
24.4.5	The construction of buildings including exterior alteration to existing buildings ~~including buildings~~ located within an approved/registered building platform area. Control is restricted to: • Building ~~location~~ scale and form. • …	~~RD~~ **C**
24.4.6	The construction of new buildings and the exterior alteration to existing buildings located outside an approved building platform area.	**D**
24.4.7	The identification of a new residential building platform	**D**
[*renumber accordingly*]	**…**	

The reasons for the modifications are:

In relation to the status of activities not listed in the Tables:

(a) The discretionary status is more appropriate for activities that are unintentionally left out of the table, including, for example, in Rule 24.4.29 – works within root protection zone or trimming of exotic vegetation of a height that is greater than 4m. The status of such works for trees less than 4m would be non-complying, which is not the intention. The alternative is to ensure that the tables list the status of a breach for all relevant activities, such as those where a dimension is included as part of the rule. If that is adequately addressed then the overall non-complying default status for "activities not listed" is appropriate.

In relation to the status of buildings:

(b) The subdivision rules require (or should require) that a residential building platform (**RBP**) is nominated on a scheme plan at the time of subdivision so that the consent authority and other parties can assess the likely effects of a future dwelling on the new lot. The location and effects of a future dwelling, along with other associated works such as access and landscaping, will be sufficiently apparent, at the time of subdivision, to allow certainty of the right for a future dwelling and to preclude any need for subsequent Council discretion to refuse an application for a dwelling[3];

(c) The Restricted Discretionary Activity (**RDA**) status for a dwelling within a RBP creates too much uncertainty for property owners and is unnecessary, particularly when the purpose of the RBP is to provide certainty of residential use on the property;

(d) The Controlled activity status is more appropriate because it provides certainty for landowners while still allowing the Council to manage the effects of a dwelling within the RBP, and associated works, through imposing conditions in relation to the matters of control, as set out in the rule;

(e) The planning method of creating a RBP at the time of the discretionary activity / restricted discretionary subdivision, with controlled activity status for subsequent buildings within the RBP, is well-established in the District, and there is no evidence or section 32 evaluation suggesting that the method has generated adverse effects and is inappropriate;

(f) For buildings outside an RBP, or for the creation of a new RBP, the discretionary status is appropriate, and if necessary the same or similar assessment matters from the Rural Zone should be adopted for the WBRAZ, to enable rigorous assessment of the effects of any building not within the RBP.

6.2.3 Standards – Table 24.3

Modify Table 24.3 as follows:

	Table 24.3 – Standards	**Non-compliance Status**
24.5.1	**Building coverage** The maximum building coverage for all buildings shall be: **For lots greater than 4000m²**: 15% of lot area, or ~~500~~ **1000m² gross floor area** whichever is the lesser. **For lots less than 4000m²: 25% of lot area**	RD
…		
~~24.5.15~~	~~**Residential visitor accommodation**~~ ~~The commercial letting of one residential unit or residential flat per site for up to 3 lets not exceeding a cumulative total of 28 nights per 12 month period~~	~~D~~

The reasons for the modification are as set out above in **Part 5.2.2**.

6.2.4 Rule 24.7: Assessment matters – Restricted Discretionary Activities

Modify the rule as follows:

[3] Provided other appropriate development standards are met

24.7 Assessment Matters – <u>Controlled and</u> Restricted Discretionary Activities

24.7.1 In considering whether or not to grant consent **<u>and/</u>**or **<u>to</u>** impose conditions on a resource consent, regard shall be had to the assessment matters set out at 24.7.3 to 24.7.13.

24.7.2 All proposals for restricted discretionary activities will also be assessed as to whether they are consistent with the relevant objectives and policies for ~~the Zone or Precinct as well as those in Chapters 3-Strategic Direction; Chapter 4- Urban Development, Chapter 6-Landscapes and~~ Chapter 28- Natural Hazards.

The reason for the modification to 24.7.1 is: the modification is a consequential amendment arising from the submission in 6.2.2 above, in relation to the status of dwellings within a RBP.

The reason for the modification to 24.7.2 is: it is inappropriate to require assessment of an RDA against the higher order objectives and policies of the Plan, as this opens up the discretion to practically any matter, rather than restricting it to the matters for which the rule is designed. The costs to the applicant and the Council of requiring such an assessment would be unreasonably high. The only reasonably exception is the provisions for natural hazards.

6.2.5 Rule 24.7.3 Assessment matters

Modify Rule 24.7.3 as follows:

	Assessment matters
24.7.3	New buildings (and alterations of existing buildings) **<u>within a residential building platform</u>**, residential flat, building coverage and building height infringements: **Landscape and visual amenity** a. Whether the **~~location,~~** form, scale, design and finished materials including colours of the building(s) adequately responds to the identified landscape character and visual amenity qualities of the landscape character units set out in Schedule 24.8 and the criteria set out below. b. The extent to which the **~~location and~~** design of buildings and ancillary elements and the landscape treatment complement the existing landscape character and visual amenity values, including consideration of: … • Design**~~,~~ <u>and</u>** size **~~and location~~** of accessory buildings …
…	

The reason for the submission is that the location of buildings will have been addressed at the time of subdivision.

6.2.6 Schedule 24.8 – Landscape Classification Unit 15 – Hogans Gully

The LUC15 description in Schedule 24.8 should be modified to take into account the opportunities for well-designed development to be located in those parts of the LUC that can absorb development without adverse effects on the landscape and visual amenity values of site and the wider surrounds.

6.3 Chapter 27: Subdivision

Insert new rules that:

(a) Exempt the areas from the subdivision minimum lot size for the WBRAZ in Chapter 27, Rule 27.5.1; and

(b) Provide for subdivision as a discretionary activity, with no minimum lot size, using the landscape assessment matters from the Rural Zone, and inserting the LCU15 provisions as part of the assessment matters for the Council's discretion.

7. General submissions

7.1 Chapter 25: Earthworks

(a) Modify Chapter 25 Table 25.5 as follows:

Table 25.2	**Maximum Volume**	Maximum Total ~~Value~~ **Volume**
…		
25.5.4	… Wakatipu Basin Rural Amenity Zone and Precinct	~~400m^3~~ **1000m^3**
…		
25.5.10	**Hogans Gully Zone – golf course construction and maintenance**	**No maximum**
…		

(b) The reason for change to Rule 25.5.4 is so that if WBRAZ remains on the land the earthworks maximum is consistent with the operative rural zone maximum.

(c) The exception to this is for golf course earthworks, which should be unlimited, as is the case for Jacks Point, and this is the reason for the insertion of new Rule 25.5.11, so that all earthworks related to the construction and on-going maintenance of the Hogans Gully golf course is recognised.

7.2 Variation to Stage 1 Landscapes – Chapter 6 – Rule 6.4.1.3

Modify the rule as follows:

6.4.1.3 *The landscape categories assessment matters do not apply to the following within the Rural Zones:*

a. Ski Area Activities within the Ski Area Sub Zones.

b. The area of the Frankton Arm located to the east of the Outstanding Natural Landscape line as shown on the District Plan maps.

*c. ~~The Gibbston Character Zone~~. **The Gibbston Character Zone***

*d. ~~The Rural Lifestyle Zone~~. **The Rural Lifestyle Zone***

*e. ~~The Rural Residential Zone~~. **The Rural Residential Zone***

f. The Wakatipu Basin Rural Lifestyle Zone

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The reasons for the submission are:

(a) The zones that have been deleted from the exemptions for assessment under the landscape categories in Chapter 6 (Gibbston Character, Rural Lifestyle and Rural Residential) should be reinstated in the list of exemptions because:

- these zones have already been determined to have certain landscape values and ability to absorb certain activities and development densities; and
- the zones have their own sets of objectives, policies, rules and assessment matters, formulated for the specific attributes and circumstances of those zones. The matters of discretion and assessment matters are sufficient to properly guide the determination on specific applications;
- there is no adequate justification for removing these zones from the exemptions.

(b) The WBLP should be added to the list of exemptions for the same reason as in (a) above – the WBLP zones has its own set of objectives, policies, rules and assessment matters, formulated for the specific attributes and circumstances of the zone.

7.3 Variation to higher order Chapters of the PDP

The Submitter considers that various modifications are necessary to Chapter 3 (Strategic Direction) and Chapter 6 (Landscapes) of the PDP, so that the WBRAZ and the WBLP are integrated with and have higher order authority from those chapters. This will include new objectives and policies within those chapters.

8. Part 2 and section 32 of the Act

8.1 Section 5

Taking into account the attributes of the Hogans Gully land, the most appropriate way to achieve the purpose of the Act is to delete the WBRAZ and to adopt Hogans Gully Special Zone.

The Hogans Gully Zone achieves the sustainable management purpose of the Act by enabling appropriate activities and development, and accordingly social and economic well-being, in a manner that: sustains the potential of the natural and physical resources of the site and the wider Wakatipu Basin, for future generations; will continue to safeguard the life-supporting capacity of air, water, soil, and ecosystems; and will avoid or mitigate potential adverse effects including effects on landscape and visual amenity values.

8.2 Section 7

The modifications sought in this submission are directly relevant to achieving the following matters to which particular regard must be given:

(b) the efficient use and development of natural and physical resources;

(ba) the efficiency of the end use of energy;

(c) the maintenance and enhancement of amenity values;

(f) maintenance and enhancement of the quality of the environment:

(g) any finite characteristics of natural and physical resources;

The Special Zoning over the HGF land is the most efficient use and development of the natural and physical resources of the land given the physical attributes of the land, in close proximity to existing services and amenities, and taking into account the landscape values of the site and the wider area.

The Special Zone provisions will maintain and enhance the amenity values and the quality of the environment, because of the location and design of the activities promoted in the Zone.

Land that has the various attributes of the HGF land is a finite resource in the Basin and the zoning should reflect these attributes.

8.3 Summary – Part 2 of the Act

The Hogans Gully Special Zone will best achieve the purpose and principles of the Act, for the reasons set out above, than the WBRAZ. The WBLP, subject to the modifications sought in this submission, will better achieve the purpose of the Act than the WBRAZ.

8.4 Section 32

Further grounds for the submission points outlined in the above table are that:

(a) The Council's section 32 evaluation does not establish that the objectives of the WBRAZ are the most appropriate to achieve the purpose of the Act, in respect of the HGF land;

(b) The benefits and costs of the WBRAZ provisions have not been appropriately assessed or quantified in accordance with section 32 of the RMA, nor have they been assessed with regards to their suitability for giving effect to the relevant objectives;

(c) Alternative zone provisions for the land subject to this submission have not been adequately assessed;

(d) The Chapter 45 – Hogans Gully Zone promoted in this submission, have objectives that are more appropriate for achieving the purpose of the Act than the WBRAZ, for the HGF land and are the most appropriate way to achieve the higher order objectives of the PDP;

(e) The methods (policies and rules) of the Hogans Gully Zone are the most effective and efficient for achieving the relevant objectives;

(f) The WBLP provisions with modifications promoted in this submission for the HGF land are more appropriate for achieving the purpose of the Act than the WBRAZ, for the HGF land, and are more appropriate for achieving the higher order objectives of the PDP;

(g) The methods (policies and rules) of the WBLP are more effective and efficient for achieving the relevant objectives than the WBRAZ.

Additional section 32 evaluation is provided in **Annexure B**.

9. HGF seeks the following decision from the Queenstown Lakes District Council:

(a) HGF seeks the relief set out in **Parts 3 – 7** of this submission.

(b) HGF seeks in the alternative additional or consequential relief necessary or appropriate to address the matters raised in this submission and/or the relief requested in this submission, including any such other combination of plan provisions, objectives, policies, rules and standards provided that the intent of this submission, as set out in Parts 2 – 8 of this submission, is enabled.

HGF **DOES** wish to be heard in support of this submission.

If others make a similar submission, HGF will consider presenting a joint case with them at a hearing.

Signature of Submitter

J A Brown Date: 23 February 2018
Authorised to sign on behalf of Hogans Gully Farm Ltd.

Telephone: 03 409 2258 / 021 529 745

Notes to person making submission:

If you make your submission by electronic means, the email address from which you send the submission will be treated as an address for service.

If you are a person who could gain an advantage in trade competition through the submission, your right to make a submission may be limited by clause 6 (4) of Schedule 1 of the Resource Management Act 1991.

The submitter could NOT gain an advantage in trade competition through this submission

ATTACHMENTS:

Figure 1:	Planning Map 13a showing proposed addition of Hogans Gully Special Zone
Figure 2:	Planning Map 26 showing proposed addition of Hogans Gully Special Zone
Figure 3:	Planning Map 30 showing proposed addition of Hogans Gully Special Zone
Figure 4:	Planning Map 13a showing proposed addition of Wakatipu Basin Lifestyle Precinct
Figure 5:	Planning Map 26 showing proposed addition of Wakatipu Basin Lifestyle Precinct
Annexure A:	"Chapter 45: Hogans Gully Zone", prepared by Brown & Company Group, dated 23 February 2018
Annexure B:	Hogans Gully Special Zone - Section 32 Evaluation Report, prepared by Brown & Company Group, dated 23 February 2018
Annexure C:	Proposed Structure Plan, prepared by Baxter Design Group, dated 8 February 2018

Annexure D: Golf Concept Masterplan, prepared by Baxter Design Group, dated 21 February 2018

Annexure E: Landscape Assessment, prepared by Baxter Design Group, dated 23 October 2015

Annexure F: Transport Assessment, prepared by Bartlett Consulting, dated October 2015

Annexure G: Preliminary and Site Investigation, prepared by e3 Scientific, dated 5 December 2017

Annexure H: Infrastructure Report, prepared by Holmes Consulting, dated October 2015

Annexure I: Geotechnical assessment, prepared by Geosolve, dated December 2017

Annexure J: Ecological Review, prepared by Davis Consulting Limited, dated 22 October 2015

Annexure K: Property Report, prepared by APL Property Queenstown Ltd, dated 1 October 2015

2313

Maps created by QLDC GIS Department

Parcel boundaries derived from New Zealand Core Records System Vector Data (Corax) obtained from LINZ under the LINZ Licence Agreement

Legend

- Parcel/Road Boundary
- Landscape Feature
- State Highway
- Unformed Roads
- Water (zoned Rural unless otherwise shown)
- Zones excluded from Stages 1 and 2 of the District Plan Review
- New Road Parcels
- Community Purpose - Campground
- Community Purpose - Cemetery
- Community Purpose - Golf Course
- Active Sports and Recreation
- Civic Spaces
- Community Purposes
- Informal Recreation
- Nature Conservation
- Wakatipu Basin Rural Amenity Zone
- Wakatipu Basin Lifestyle Precinct
- Rural
- Special Zone

All Stage 1 and Stage 2 land is subject to the District Wide Earthworks Chapter 25, Transport Chapter 29 and Signs Chapter 31.

The District Wide Annotations notified in Stage 1 remain applicable to all Stage 1 and Stage 2 land. Refer to the Proposed District PlanMaps for the location of the District Wide annotations. Specifically the Open Space and Recreation Zoned land that was not notified in Stage 1 is subject to the District Wide annotations and submissions can be made on a District Wide annotation that affects this land.

The Council has identified where the proposed Visitor Accommodation Sub Zones are to be located. Any person may make a submission on the location and extent of Visitor Accommodation Sub Zones as it relates to Stage 1 and Stage 2 land.

QUEENSTOWN LAKES DISTRICT COUNCIL

PDP Stage 2 Notification Map 13d - Wakatipu Basin Rural Amenity Zone

0 1 2 Km

N

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Parcel boundaries derived from LINZ data, CC-BY 4.0

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- Nature Conservation
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- Wakatipu Basin Lifestyle Precinct
- Rural
- Special Zone

28

27

13d

26

Hogans Gully Zone

Lake Hayes

Arrow River

Mill Creek

Macetown Rd

Bush Creek Rd

Alan Reids Rd

Dennison Way

Malaghans Rd

Streamside Lane

Middleridge Lane

Butel Rd

The Ave

Orchard Hill

Malaghans Ridge

Mill Green

Tarahea Lane

Dalgleish Lane

Dalesman Lane

Millbrook Lane

Avenham Ridge

The Mews

Fox's Rush

Waterfall Park Rd

Mooney Rd

Speargrass Flat Rd

Elysium Way

Stoppehill Rd

Threepwood Rd

Arrowtown Lake Hayes Rd

Wilding Rd

Caldwell Lane

Haggitt Lane

Bendemeer Lane

Bloxham Lane

Baird Lane

McDonnel Rd

Hogans Gully Rd

Whitechapel Rd

Crown Range Rd

Glencoe Rd

Tobins Track

Adelaide Terrace

Centennial Ave

Topp St

Carter Ave

Hood Ct

Reid Ct

Bracken Ct

Preston Dr

Devon St

Cornwall St

Norfolk St

Argyle Place

Suffolk St

Kent St

Durham St

Surrey St

Essex Ave

Maple Lane

Marlee Rd

Flynn Lane

Ramshaw Lane

Flint St

Buckingham St

Willtshire St

Anglesea St

Caernarvon St

Stafford St

Derby St

Rifle Butt Rd

Thornton St

Marlborough St

Cameron Lane

Bedford St

Nairn St

Criterion St

Gibbston Hwy

Lake Hayes Arrow Junction Hwy

SH 6

Lake Hayes Arrow Junction Hwy

Rapley Close

QUEENSTOWN LAKES DISTRICT COUNCIL

PDP Stage 2 Notification Map 26 - Speargrass Flat, Millbrook

0 0.5 1 Km

N

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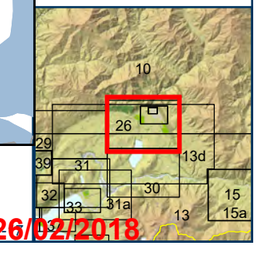
The Council has identified where the proposed Visitor Accommodation Sub Zones are to be located. Any person may make a submission on the location and extent of Visitor Accommodation Sub Zones as it relates to Stage 1 and Stage 2 land.

26



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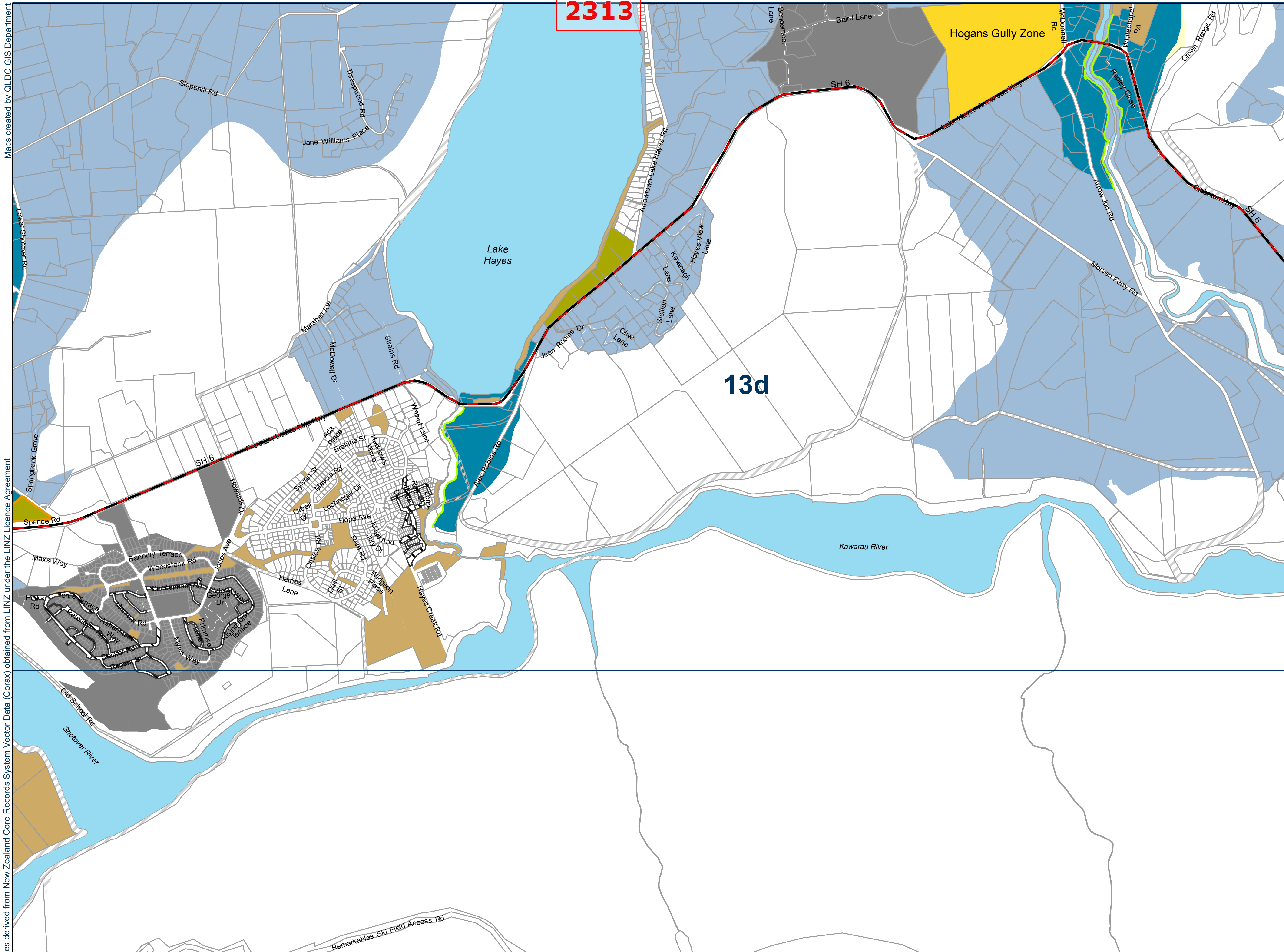

Legend

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- Landscape Feature
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- Zones excluded from Stages 1 and 2 of the District Plan Review
- New Road Parcels
- Community Purpose - Cemetery
- Community Purposes
- Informal Recreation
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- Wakatipu Basin Lifestyle Precinct
- Rural
- Special Zone

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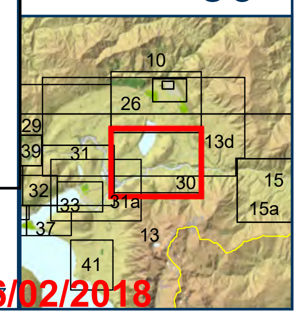
30



QUEENSTOWN LAKES DISTRICT COUNCIL

PDP Stage 2 Notification Map 30 - Lake Hayes

0 0.5 1
Km

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Parcel boundaries derived from New Zealand Core Records System Vector Data (Corax) obtained from LINZ under the LINZ Licence Agreement

Legend

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QUEENSTOWN LAKES DISTRICT COUNCIL

PDP Stage 2 Notification Map 13d - Wakatipu Basin Rural Amenity Zone

0 1 2 Km

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Amended version received 26/02/2018

Date Published: 01-Nov-17

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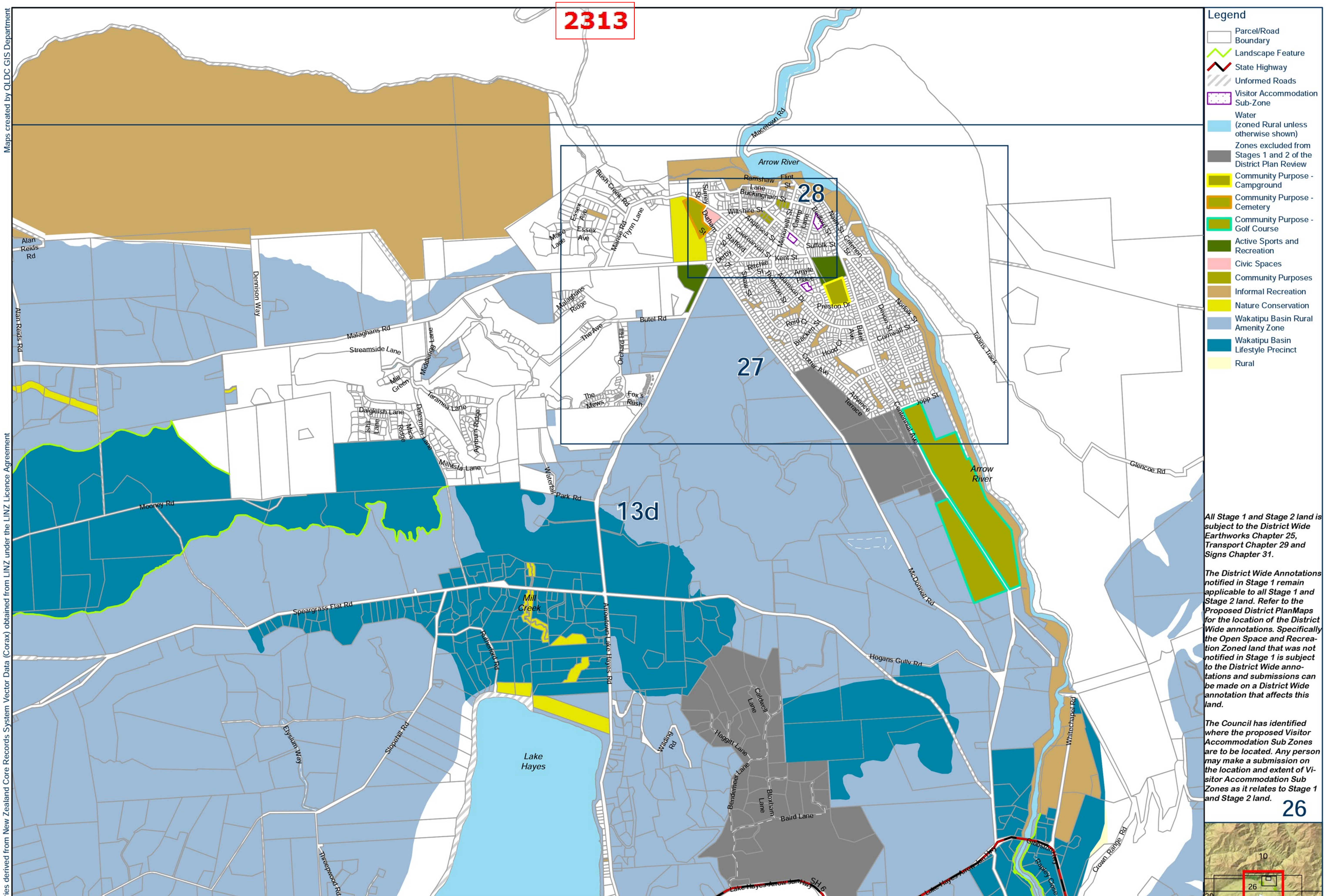

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26

Maps created by QLDC GIS Department

QUEENSTOWN LAKES DISTRICT COUNCIL

PDP Stage 2 Notification Map 26 - Speargrass Flat, Millbrook

Amended version received 26/02/2018

Date Published: 01-Nov-17

45 Hogans Gully Zone

45.1 Zone Purpose

The purpose of the Zone to enable a golf course-based resort. The Zone provides for the golf course development, with clubhouse, driving range, maintenance facilities, and associated commercial activities, along with limited residential and visitor accommodation activities to support the golf course. The Zone promotes development that is absorbed into and is subservient to the surrounding landscape and rural context by providing for large open space and landscape protection areas, ecological enhancement, and building location and design controls.

45.2 Objectives and Policies

45.2.1 Objective – Commercial recreational, residential, and visitor accommodation activities that are sensitive to the landscape, amenity and nature conservation values of the rural environment.

Policies

45.2.1.1 Provide for a high-quality golfing experience with associated clubhouse, commercial, residential, visitor accommodation, and maintenance activities and facilities in a comprehensive master-planned environment.

45.2.1.2 Require development to be in accordance with a Structure Plan to ensure development is appropriately located and does not adversely affect the landscape, recreational, and ecological values and opportunities of the Zone.

45.2.1.3 Protect and enhance the ecological values through enhancement planting and other protection measures.

45.2.1.4 Require built development to be subservient to the landscape of the Zone and the wider rural environment by managing external materials and colours of all buildings.

45.2.1.5 Promote open space and farming activities as the backdrop to the golf course and to maintain landscape values.

45.2.1.6 Provide the opportunity for sustainable water, stormwater, wastewater collection, treatment and disposal practises.

45.2.1.7 Require that landscaping contributes to the ecological diversity and enhancement of the Zone.

45.3 Other Provisions and Rules

45.3.1 District Wide

Attention is drawn to the following District Wide Chapters. All provisions referred to are within Stage 1 of the Proposed Plan, unless marked as Operative District Plan (ODP).

1 Introduction	2 Definitions (& ODP)	3 Strategic Directions
4 Urban Development	5 Tangata Whenua	6 Landscapes
24 Signs (ODP)	25 Earthworks (ODP)	26 Historic Heritage
27 Subdivision	28 Natural hazards	29 Transport (ODP)
30 Utilities and Renewable Energy	31 Hazardous Substances (ODP)	32 Protected Trees

33 Indigenous Vegetation	34 Wilding Exotic trees	35 Temporary Activities and Related Buildings
36 Noise	37 Designations	Planning Maps

45.3.2 Clarification

Where an activity does not comply with a Standard listed in the Standards table, the activity status identified by the "Non Compliance Status" column shall apply. Where an activity breaches more than one Standard, the most restrictive status shall apply to the Activity.

The following abbreviations are used within this Chapter:

P	Permitted	C	Controlled
RD	Restricted Discretionary	D	Discretionary
NC	NC Non Complying	PR	Prohibited

45.4 Rules – Activities

	Activities – Hogans Gully Zone	Status
45.4.1	**Any activity** which complies with the rules for permitted activities and is not listed as a controlled, discretionary, non-complying or prohibited activity.	P
45.4.2	**Farming -** In the Landscape Protection Area	P
45.4.3	**Buildings** – In the following activity areas: Activity Areas R3, R4, R5, R6 provided they meet the standards in Rule 45.5.2.	P
45.4.4	**Farm Buildings** in all activity areas aside from the Landscape Protection Area. Council shall exercise control over effects on landscape values.	C
45.4.5	Licensed Premises in the Clubhouse Activity Area Premises licensed for the consumption of alcohol on the premises between the hours of 10pm and 8am, provided that this rule shall not apply to the sale and supply of alcohol: a. To any person who is residing (permanently or temporarily) on the premises; b. To any person who is present on the premises for the purposes of dining up to 12am. With the exercise of Council's control limited to: i. The scale of the activity ii. Effects on amenity (including that of adjoining residential zones and public reserves iii. The configuration of activities with the building and the site (e.g, outdoor seating, entrances). iv. Noise and hours of operation.	C
45.4.6	**Buildings** in: a. Residential Activity Areas R1, R2, R7, R8, R9 and R10 b. Clubhouse Activity Area c. Maintenance Activity Area With the exercise of the Council's control limited to: i. The external appearance of the building including the use of natural materials. ii. The location of car parking and curtilage areas	C

	Activities – Hogans Gully Zone	Status
	iii. Landscaping associated with the development and the extent to which landscaping contributes to the integration of the golf course amenities, ecological enhancement, and the amenities of the development areas.	
45.4.7	Buildings in the Pastoral / Golf Course Activity Area, the Landscape Protection Activity Area and the Ecology / Golf Activity Area except for utilities, service and accessory buildings for farming or golf purposes up to 40m^2 in gross floor area.	NC
45.4.8	**Residential activity** in the Maintenance Area, Pastoral / Golf Course Activity Area, Landscape Protection Activity Area, Ecology / Golf Activity Area	NC
45.4.9	**Visitor Accommodation including Residential Visitor Accommodation and Homestays** in all Residential Activity Areas and the Clubhouse Activity Area	P
45.4.10	**Commercial and Community Activities**, except for: a. Commercial recreation activities; or b. Offices and administration activities directly associated with the management and development of the resort or ancillary to other permitted or approved activities located within the Maintenance Activity Area and Clubhouse Activity Area; or c. Bars, restaurants in the Clubhouse Activity Area	D
45.4.11	**Commercial Recreation Activities,** except for: a. Golf courses and related ancillary commercial activities	D
45.4.11A	**Golf Tournaments** With the exercise of the Council's control limited to: a. Traffic and pedestrian management and safety within the site and on the local roading network; b. Temporary use by helicopters c. Waste management and disposal, sanitation d. Number of events per year e. Timing of set up and pack down for each event	C
45.4.12	**Mining**	NC
45.4.13	**Service Activities,** except for: a. activities directly related to other approved or permitted activities within the Zone; and b. located within the Maintenance Activity Area; or located within the Pastoral / Golf Activity Area and which any buildings have a gross floor area of no more than 40m^2	NC

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	Activities – Hogans Gully Zone	Status
45.4.14	**Industrial Activities**; except for: a. activities directly related to other approved or permitted activities within the Zone; and b. activities undertaken in the Maintenance Activity Area	NC
45.4.15	**Licensed Premises** outside of the Clubhouse Activity Area Premises licensed for the consumption of alcohol on the premises between the hours of 11pm and 8am, provided that this rule shall not apply to the the sale and supply of alcohol: a. to any person who is residing (permanently or temporarily) on the premises; to any person who is present on the premises for the purpose of dining up until 12am.	NC
45.4.16	**Panelbeating, spray painting, motor vehicle repair or dismantling** except for activities directly related to other approved or permitted activities within the Zone and located within the Maintenance Activity Area.	NC
45.4.17	**Forestry Activities**	NC
45.4.18	**Fibreglassing, sheet metal work, bottle or scrap storage, motorbody building or wrecking, fish or meat processing (excluding that which is ancillary to a retail premises such as a butcher, fishmonger or supermarket), or any activity requiring an Offensive Trade Licence under the Health Act 1956.**	PR
45.4.19	**Factory Farming**	PR
45.4.20	**Landing and taking off of helicopters within the Clubhouse Activity Area** With the exercise of the Council's control limited to: a. The number of trips b. Noise effects on properties outside the Zone c. The flight path to and from the landing location.	C

45.5	**Standards – Hogans Gully Zone**	**Non-compliance status**
45.5.1	**Setbacks** No building or structure shall be located closer than 6m to the Zone boundary, and <u>in addition:</u> No building shall be located closer than 10m from McDonnell Road or Hogans Gully Road.	RD

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45.5	Standards – Hogans Gully Zone	Non-compliance status
45.5.2	**Building Materials, Colours and Landscaping** **All buildings, including any structure larger than 5m2, new, relocated, altered, reclad or repainted, are subject to the following in order to ensure that they are visually recessive within the surrounding landscape:** Exterior colours of buildings: **44.5.1.1** All exterior surfaces (excluding roofs and fittings such as guttering) shall be dark timbers or locally sourced schist. **44.5.1.2** Pre-painted steel, and all roofs shall have a reflective value of not greater than 20% **44.5.1.3** Surface finishes shall have a reflective value of not greater than 30% Discretion is restricted to all of the following: i. Whether the building will be visually prominent, especially in the context of the wider landscape, rural environment and as viewed from neighboring properties ii. Where the proposed colour is appropriate given the existence of established screening or in the case of alterations, if the proposed colour is already present on a long established building iii. The size and height of the building where the subject the colours would be applied. iv. The extent of landscaping undertaken to soften all buildings.	RD
45.5.3	**Residential Density** The maximum number of residential units within the Zone shall be 90.	NC
45.5.4	**Building Height** Dwellings will be restricted to single storey buildings, no higher than 5 metres from floor slab to ridge or the highest point of the roof. Where flat roofs are utilised as the primary form, the dwelling height shall be restricted to 3.75 metres. Chimneys and light well features etc. may extend 2 metres above building heights but shall be no more than 1.5 x 1.5 metres in plan dimension.	D

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45.5	Standards – Hogans Gully Zone	Non-compliance status
45.5.5	**Glare** 43.5.6.1 All fixed lighting shall be directed down and away from adjacent roads and properties. 43.5.6.2 Any building or fence that can be viewed from a public place that is constructed or clad in metal, or material with reflective surfaces shall be painted or otherwise coated with a non-reflective finish. No activity shall result in a greater than 3.0 lux spill, horizontal and vertical, of light onto any property located outside of the Zone, measured at any point inside the boundary of the adjoining property.	
45.5.6	**Nature and Scale of Activities** **Except** within the Clubhouse and Maintenance Activity Areas: 43.5.7.1 No goods, materials or equipment shall be stored outside a building, except for vehicles associated with the activity parked on the site overnight. 43.5.7.2 All manufacturing, altering, repairing, dismantling or processing of any materials, goods or articles shall be carried out within a building	
45.5.7	**Retail Sales** 43.5.8.1 No goods or services shall be displayed, sold or offered for sale from a site **except**: a. goods grown, reared or produced on the site; or b. goods and services associated with, and ancillary to the recreation activities taking place (within buildings associated with such activities) within the Clubhouse Area; or **c.** within the Clubhouse Activity Area.	NC
45.5.8	**Maximum Total Site Coverage** The maximum site coverage shall not exceed 5% of the total area of the Zone. For the purposes of this Rule, site coverage includes all buildings, accessory, utility and service buildings but **excludes** weirs, filming towers, bridges and roads and parking areas.	NC
45.5.9	**Fire Fighting** A fire fighting reserve of water shall be maintained. The storage shall meet the New Zealand Fire Service Firefighting Water Supplies Code of Practice 2008.	NC

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45.5	Standards – Hogans Gully Zone	Non-compliance status
45.5.10	**Atmospheric Emissions** There shall be no indoor solid fuel fires, except for: a. feature open fireplaces in the clubhouse and other communal buildings including bars and restaurants. Note – Council bylaws and Regional Plan rules may also apply to indoor and outdoor fires.	NC

45.6 Non-Notification of Applications

45.6.1 Except as provided for by the Act, all applications for controlled activities and restricted discretionary activities will be considered without public notification or the need to obtain the written approval of or serve notice on affected persons.

Chapter 27 – Subdivision

Consequential amendment to Chapter 27 – Subdivision

(a) Modify Chapter 27 to provide for subdivision as a Controlled Activity in the Hogans Gully Zone:

27.4.4 (new) The following shall be controlled activities:

(a) Subdivision in the development areas in the Hogans Gully Zone Structure Plan.

Control is limited to the following:

(i) Lot size and dimensions, including whether the lot is of sufficient size and dimensions to effectively fulfil the intended purpose of the land use;
(ii) Property access and roading;
(iii) Natural hazards;
(iv) Fire fighting water supply;
(v) Water supply;
(vi) Stormwater disposal;
(vii) Sewage treatment and disposal;
(viii) Energy supply and telecommunications;
(ix) Easements.

(b) Modify Table 27.5.1 as follows:

27.5.1 No lots to be created by subdivision, including balance lots, shall have a net site area or where specified, average, less than the minimum specified.

Zone		Minimum Lot Area
…		…
Hogans Gully Zone		**No minimum**
…		

The reasons for the modifications are:

(a) Waterfall Park and Millbrook Zones have structure plans with no minimum lot size requirement for development within the development areas. It is appropriate for the Hogans Gully Zone to have the same rules.

(b) The controlled activity status is appropriate for subdivision that is in accordance with the structure plan for the Zone, given that the structure plan determines the layout of development. The matters of control provide the Council with the ability to modify any proposed subdivision plan, through conditions, if necessary. The controlled status provides certainty in the circumstances where wider effects on the environment have already been considered through the zoning process.

Amended version received 26/02/2018

2313

Hogans Gully Special Zone

Section 32 Evaluation Report

February 2018

BROWN&COMPANY
PLANNING GROUP

Amended version received 26/02/2018

Table of Contents

Amended version received 26/02/2018

Section 32 Evaluation Report: Hogan Gully Zone

1. Strategic Context

Section 32(1)(a) of the Resource Management Act 1991 ('the Act') requires that a Section 32 evaluation report must examine the extent to which the proposed objectives are the most appropriate way to achieve the purpose of the Act.

The purpose of the Act requires an integrated planning approach and direction:

> *5 Purpose*
>
> *(1) The purpose of this Act is to promote the sustainable management of natural and physical resources.*
>
> *(2) In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—*
>
> *(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
> *(b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
> *(c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

2. Regional Planning Documents

The Regional Policy Statement 1998 ["RPS"] is currently under review itself, and may be further advanced in that process by the time the District Plan Review is notified. At the time of submissions closing on the QLDC proposed District Plan, further submissions have closed on the Proposed Regional Policy Statement. Amendments to this evaluation may be required to accommodate that change. A Section 32 is an evolving document and changes can be made up to and including at the stage of an Environment Court decision. The District Plan must *give effect to* the operative RPS and must *have regard to* any proposed RPS.

The operative RPS contains a number of objectives that are relevant to this review, including:

- 4.4.1 to 4.4.5 (Manawhenua Perspective)
- 5.4.1 to 5.4.5 (Land)
- 6.4.2 to 6.4.7, 6.57 (Water)
- 7.4.1 (Air)
- 9.4.1 to 9.4.3 (Built Environment)
- 10.4.1 (Biota)

Each objective has related policies which have also been considered.

The proposed plan change provisions are consistent with, and give effect to, the relevant operative RPS provisions.

A district plan is required to be not inconsistent with a regional plan.

The Regional Plan – Water for Otago is relevant to this proposal. The following objectives in particular are identified:

- 7.A.1 to 7.A.3. (In relation to the maintenance of water quality).

There are a number of related policies which have also been considered.

The other notably relevant regional level document is the Regional Plan – Air for Otago. It is noted that the Objectives 6.1.1 and 6.1.2 are relevant, as are a number of related policies. These relate to the maintenance of ambient air quality and the avoidance of the adverse effects of localized discharges.

Overall, this submission is not inconsistent with relevant regional plans.

3. Proposed Queenstown Lakes District Plan – Strategic Direction

Strategic Directions

The following goals and objectives from the Strategic Directions chapter of the proposed District Plan are relevant to this assessment:

Table 1 – Assessment Against the Goals and Objectives of the Strategic Directions Chapter

Strategic Directions Chapter	Assessment
Goal 3.2.1: To develop a prosperous, resilient and sustainable economy Objective - To enable the development of innovative and sustainable enterprises that contribute to diversification of the District's economic base and create employment opportunities.	Golf tourism is very valuable to the District's economy, at present there is a need for additional courses in the District to meet the needs of this growing tourism stream. The Hogans Gully Special Zone will create another choice for visitor or resident golfers, and will present a point of difference to other established golf courses in the area, in that it is be of a rural nature (the greens surrounding by farm land and native plantings). The zone will contribute to the economy through additional employment opportunities.
Goal 3.2.3: A quality built environment taking into account the character of individual communities Objective - To protect the District's cultural heritage values and ensure development is sympathetic to them.	The proposed Zone will create its own identity around a rural based golf course and clubhouse. The Residential and Visitor Accommodation development will be designed in accordance with Design Controls which will ensure that development is subservient to the environment and landscape it is a part of.
Goal 3.2.4: The protection of our natural environment and ecosystems Objective - To promote development and activities that sustain or enhance the life supporting `capacity of air, water, soil and ecosystems. Objective - To maintain or enhance the survival chances of rare, endangered, or vulnerable species of indigenous plant or animal communities. Objective - To preserve or enhance the natural character of the beds and margins of the District's lakes, rivers and wetlands.	The proposed Zone creates opportunities for the protection and enhancement of the ecology of the area, The Davis Consulting Report summarises the ecological values of the site and outlines restoration opportunities for the land.

Amended version received 26/02/2018

Strategic Directions Chapter	Assessment
Objective - To maintain or enhance the water quality of our lakes, rivers and aquifers.	
Goal 3.2.5: Our distinctive landscapes are protected from inappropriate development. Objective - To minimise the adverse landscape effects of subdivision, use or development in specified Visual Amenity Landscapes and Other Rural Landscapes. Objective - To direct new subdivision, use or development to occur in those areas that have potential to absorb change without detracting from Landscape and visual amenity values. Objective - To recognise there is a finite capacity for residential activity in rural areas if the qualities of our landscape are to be maintained. Objective - To recognise that agricultural land use is fundamental to the character of our landscapes.	The proposed Zone has been planned via the building up of a structure plan considering the landscape, amenity and ecological attributes of the area. In turn development has been considered only appropriate in areas with the most ability for it to be absorbed. Other parts of the proposed zone will be retained for ecological restoration and protection, rural farming purposes and the golf course (of which only the greens will be manicured). The proposed Zone allows for development but only when it is subservient to the surrounding landscape. The proposed design controls will reinforce the premise that development should blend into the landscape.
Goal 3.2.7: - Council will act in accordance with the principles of the Treaty of Waitangi and in partnership with Ngai Tahu. Objective - Protect Ngai Tahu values, rights and interests, including taonga species and habitats, and wahi tupuna. Objective – Enable the expression of kaitiakitanga by providing for meaningful collaboration with Ngai Tahu in resource management decision making and implementation	Consultation will be undertaken with Ngai Tahu in the consenting phase of the project. The Zone presents the opportunity for the regeneration and protection of native fauna and fauna. The normal protocols for accidental discovery of any archeological items will be followed when works are underway.

4. Commissioned Reports

A number of reports have been commissioned to support this submission to the Proposed District plan, undertake an Assessment of Environmental Effects provide context for the Section 32 analysis.

The Commissioned reports (where relevant, names used from hereon in the rest of this report are in brackets):

- Proposed Structure Plan, prepared by Baxter Design Group, dated 8 February 2018
- Golf Concept Masterplan, prepared by Baxter Design Group, dated 21 February 2018
- Landscape Assessment, prepared by Baxter Design Group, dated 23 October 2015
- Transport Assessment, prepared by Bartlett Consulting, dated October 2015
- Preliminary and Site Investigation, prepared by e3 Scientific, dated 5 December 2017
- Infrastructure Report, prepared by Holmes Consulting, dated October 2015
- Geotechnical assessment, prepared by Geosolve, dated December 2017
- Ecological Review, prepared by Davis Consulting Limited, dated 22 October 2015
- Property Report, prepared by APL Property Queenstown Ltd, dated 1 October 2015

The key resource management issues are summarised as follows:

- Landscape and Amenity
- Access
- Infrastructure Provision
- Ecology
- Farming

5. Options

The following section outlines broad options considered to address the issues, and makes recommendations as to the most appropriate course of action in each case.

The Options considered are as follows:

1. Status Quo (i.e. retain proposed Wakatipu Basin Rural Amenity Zone - **WBRAZ**)
2. Rezone to create a "Special Zone" based around golf (ie Hogan Gully Zone)
3. Rezone as Wakatipu Basin Lifestyle Precinct Zone (**WBLPZ)**

The following tables outline the Benefits, Costs, Efficiently, Effectiveness and the Risk of Acting or not Acting for each options.

Option 1: Status Quo (Proposed WBRAZ)	
Benefits	○ Retains open space and ruralness when viewed from the Crown Range Road ○ Preserves the land for another land use in the future (which may or may not be residential or rural in nature) ○ Would create the least landscape change (assuming the weeds and wildings do not take hold) ○ Opportunities for ecological benefits to be included in the development
Costs	○ The underlying zoning does not allow for residential or resort development without a plan change/variation process. ○ Potential for ad-hoc development if the future aspirations of the landowner are undertaken by resource consent. ○ Lost opportunity to create a master-planned residential development over multiple titles of land. ○ The future of the land would be uncertain, but it would be unlikely to be put to efficient use and weeds and pests may not be contained ○ Opportunities for ecological enhancement would not be realized ○ The WBRAZ zoning does not reflect the findings of the Wakatipu Basin Land Use Study which finds that the site has a medium potential to absorb development.
Efficiency	○ Does not take advantage of the District Plan Review process, where the Council must consider the zoning of land within the District. ○ Does not take into account the findings of the Wakatipu Basin Landuse Study which concluded that the site had a moderate capacity to absorb growth
Effectiveness	○ It is not an effective to undertake ecological restoration, this would likely be not undertaken without opportunities for development.
Risk of Acting (or not acting)	○ Lost opportunity to utilise the District Plan review process to consider future landuse and considerations.

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Option 2 Rezone to Create a Resort Zone based around Golf	
Benefits	○ Would create a resort zone based around golf. Golf tourism is a fast growing part of the economy ○ Would provide for ecological protection and enhancement of part of the Zone ○ Would allow the parts of the farm that are not productive to be used for another purpose (golf) giving interest to the property ○ Would allow the opportunity for a structure planned development to be created that is integrated with the golf course, including comprehensive analysis of appropriate places for development so adverse visual effects can be minimized. ○ Provides choice for accommodation for residents and visitors to the District ○ Provides opportunities for employment, and contributes to the District's economy ○ Allows efficient use of the land
Costs	○ Golf courses are expensive to build and maintain, for the venture to be profitable there needs to be a mixture of rural residential style and type residential development to support the golf development.
Efficiency	○ A resort zone centered around golf, residential and visitor accommodation is not uncommon in the Queenstown lakes District. The use of a large area of unused rural land, with attributes suited to a significant golf investment, without significant adverse effects, is an efficient use of land, and more efficient than other rural uses including rural residential uses
Effectiveness	○ Creating a resort zone is an effective way to facilitate development around a structure plan. ○ The Zone will be effective in achieving higher order objectives and policies.
Risk of Acting (or not acting)	○ The land owner is keen to enable the construction of a golf course and has undertaken substantial background work and site investigations. Should this not be undertaken then it is likely that another land use option will be considered.

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Option 3 Rezone Wakatipu Basin Lifestyle Precinct Zone (WBLPZ)	
Benefits	○ WBLPZ zoning could still deliver the positive outcomes such as the ecological protection and restoration planned, but that would be at the owner's discretion; there are no provisions of the WBLP that encourage or mandate that. ○ Would still protect the more productive part of the farm (the lower Lucerne paddocks) while allowing development in the parts of the farm that can absorb development. ○ High quality development with design controls can be absorbed into the environment.
Costs	○ Does not result in a new golf resort to add to this part of the tourism industry. ○ Without being guided by a structure plan development could be inappropriate (location, type etc.) and reliant of a consenting process – when significant landscape analysis has already been undertaken.
Efficiency	○ Not efficient has difficult to properly integrate golf course and other activities.
Effectiveness	○ Effective in allowing development in appropriate parts of the proposed zone, for expanding the District's economic base
Risk of Acting (or not acting)	○ Piecemeal development may be undertaken by the landowner, lose the opportunity for a large land holding to be used comprehensively and efficiently

Ranking:

Option 1: Status Quo – retain proposed Wakatipu Basin Rural Amenity Zone (WBRAZ) (3)

Option 2: Rezone to a Create a Special Zone based around Golf (1)

Option 3: Rezone to Wakatipu Basin Lifestyle Precinct (**WBLP)** (2)

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6. Purpose of the Proposed Special Zone

The proposed purpose of the Hogan Gully Zone:

The purpose of the Zone to enable a golf course-based resort. The Zone provides for the golf course development, with clubhouse, driving range, maintenance facilities, and associated commercial activities, along with limited residential and visitor accommodation activities to support the golf course. The Zone promotes development that is absorbed into and is subservient to the surrounding landscape and rural context by providing for large open space and landscape protection areas, ecological enhancement, and building location and design controls.

7. Scale and Significance Evaluation

The level of detailed analysis undertaken for the evaluation of the proposed objectives and provisions has been determined by an assessment of the scale and significance of the implementation of the proposed provisions in the chapter. In making this assessment, regard has been had to the following, namely whether the objectives and provisions:

- Have effects on matters of national importance.
- Adversely affect those with specific interests, e.g., Takata Whenua, neighbours
- Involve effects that have been considered implicitly or explicitly by higher order documents.
- Impose increased costs or restrictions on individuals, communities or businesses.

8. Evaluation of proposed Objectives [S32 (1) (a)]

45.2.1 Objective- ***Commercial recreational, residential, and visitor accommodation activities that are sensitive to the landscape, amenity and nature conservation values of the rural environment***

Appropriateness of the above objective to achieve the key resource management issues:

- The objective undertakes to outline the main activities anticipated within the zone, namely Recreational, Residential and Visitor Accommodation.

- These activities are only proposed to be undertaken within the context of the rural environment in which the special zone is sited. The structure plan will ensure that the aforementioned activities occur within the context of the rural environment.

- There are opportunities to improve the nature conservation of the local environment through low stocking rates for farm land, passive stormwater design and treatment the protection and enhancement of native specifics in the local environment.

9. Evaluation of the proposed provisions S32 (1) (b)

The below table considers whether the proposed provisions are the most appropriate way to achieve the relevant objectives. In doing so, it considers the costs and benefits of the proposed provisions. *(See also Table 1- Broad options considered, in Section 4 above.)*

Table 5 – Evaluation of proposed policies

Policy Number	***Policy***	***Is the policy the most appropriate way to support the Objective? Is it efficient and effective? Does it support the objectives in the Proposed District Plan?***
45.2.1.1	Provide for a high-quality golfing experience with associated clubhouse commercial, residential, visitor accommodation, and maintenance activities and facilities in a comprehensive masterplanned development	The policy provides for the activities that are to be enabled in the Zone and therefore supports the Objective. It also supports the higher order objectives and policies in relation to diversification of rural zones for non-farming activities that require a rural location and rural resources, and for expanding the economy of the District.
45.2.1.2	Require development to be in accordance with a Structure Plan to ensure development is appropriately located and does not adversely affect the landscape, recreational, and ecological values and opportunities of the Zone.	A structure plan is a common tool used within the Queenstown Lakes District Plan. It is created through the building up of layers of information (landforms, amenity, ecology, availability of services etc) to create a framework for development and provides the finer detail of a zone. This is essentially the case when structure plans areas occur in the rural zone, they are essentially "the first cut" to identify areas of protection and areas for development. Subsequent resource consents can then be made over time which gives assurance of the finer grains of details (design, external appearance etc). As shown by the analysis accompanying the structure plan, there has been a great deal of research into the landscape characteristics of the site, a visibility analysis, landscape context as well as mapping of existing ecology. This is an effective process in that it requires all of the information about the zone to be assessed in a comprehensive manner. A structure planning process provides increased certainty to both the community (where and how development can occur) and the land owner (where development can occur and what consenting process is required to achieve it). If other development options are considered in time then they can be considered through a another consenting regime.

Policy Number	*Policy*	*Is the policy the most appropriate way to support the Objective? Is it efficient and effective? Does it support the objectives in the Proposed District Plan?*
		The process has resulted in maximum number of dwellings that is appropriate for the site, both for the potential for development to be absorbed and for the ability of the dwellings to be serviced. The policy supports the objective, provides for the best use of the land. Supports Goal 3.2.1 and its objective, golf tourism is an important part of the District's economy, this proposal will support diversification of that sector of tourism.
45.2.1.3	Protect and enhance the ecological values through enhancement planting and other protection measures.	Mapping has been undertaken for the entire site to determine the location of native species within the site. The report by Davis Consulting Limited has undertaken an assessment of the existing values and explores the ecological restoration opportunities for the site. It is efficient that this process is undertaken before development is considered or granted. This will enable the structure plan to include areas that are not appropriate for development and should in turn be protected and enhanced for their ecological values through the structure plan. The policy supports Goal 3.2.4, and its objectives by maintaining and enhancing the native species.
45.2.1.4	Require built development to be subservient to the landscape of the Zone and the wider rural environment by	The proposal is located within a visual amenity landscape at present. Development in turn should not dominate the environment in which it is sited. The structure plan process is the first opportunity to ensure development is subservient to the environment and that it does not detract from the environment as seen from outside the site. This policy strengthens that by ensuring that built development is built from materials and colours that are recessive in

Policy Number	Policy	Is the policy the most appropriate way to support the Objective? Is it efficient and effective? Does it support the objectives in the Proposed District Plan?
	managing external materials and colours of all buildings	nature. It is not uncommon for development in the Rural Zones, as well as existing zones to require resource consent for buildings to provide that check that the design and appearance of the proposal and is the context of the District Plan provisions and any other controls. In this case is it proposed to require development to adhere to design controls. These are effective in that they clearly outline what it is and is not appropriate for a particular zone or part thereof. This policy supports proposed Goal 3.2.3 and its objective.
45.2.1.5	Promote open space and farming activities as the backdrop to the golf course and to maintain landscape values	Farming is one way in which the landscape of an area can be kept "green" for amenity purposes. Within the special zone the most productive part of the zone for farming (the paddocks at road level that are cropped for Lucerne) remain for their farming purposes, while land around the golf course and native planting is proposed to used to graze sheep at a low stocking rate. This will enable the land to be still used for farming and will also create a unique backdrop to the golf course. This is an effective method as low stocking rates can also be helpful to maintain week control. This supports Goal 3.2.5 in that the effects of development are minimized to within the folds of the landscape to maintain the values of that landscape. The productive rural capacity of the farm is also maintained.
45.2.1.6	Provide the opportunity for sustainable water, stormwater, wastewater collection, treatment and disposal practises.	It is important that the density of residential and visitor accommodation development within the proposed zone can be serviced in self-sufficient and sustainable manner.
45.2.1.7	Require that all landscaping contributes to the ecological diversity and enhancement of the Zone	The ecological report has suggested that there are opportunities for native regeneration and enhancement to support fauna and fauna in the proposed zone. To strengthen this policy provides for opportunities for the land that is also developed for residential purposes to further

Policy Number	*Policy*	*Is the policy the most appropriate way to support the Objective? Is it efficient and effective? Does it support the objectives in the Proposed District Plan?*
		enhance this work. A list of plans suitable for private residential planting is included; this will support the structure plan and areas of restoration enabled by the Plan Change. This method is effective as it allows the development to contribute to mitigate effects and to create gains for the environment that would not have been undertaken if the development of the land was not undertaken. Policies and rules requiring this form of environmental compensation are being used increasingly in District planning. It also allows future residents of the area to contribute to the improvement of the ecological environment in which they live.

10. Efficiency and effectiveness of the provisions.

In electing the preferred options regard has been given to their potential effectiveness and efficiency.

Overall, it is considered that the proposed Hogan Gully Special Zone:

- Enable the creation of a golf resort to add to the number and type of courses in the District, contributing to a growing sector of the tourism offering;
- Provide for residential and visitor accommodation that does not detract from the wider environment in which it is sited
- Provide opportunities for the protection and enhancement of parts of the zone that are ecologically significant;
- Provide for best practice sustainable infrastructure for the zone;
- Allow farming to continue on the property to deliver a unique rural golf resort experience;
- Achieves the purpose of the act and the overarching objectives of the Plan through well managed and located development carried out in a responsible manner.

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2313

11. Achieving a High Quality Resort Development - Assessment of benefits and costs

The following table outlines the various effects (environmental, social, cultural) as well as opportunities for economic growth and employment opportunities that will be afforded by this proposed variation:

Policy	Environmental Effects	Social Effects	Cultural Effects	Opportunities for Economic Growth	Employment Opportunities	Quantification of Benefits and Costs (Ranking of 1-10, 1 being low (costs) and 10 being high (benefits)
Policy 45.2.1.1 **Provide for a high-quality golfing experience with associated clubhouse commercial, residential, visitor accommodation, and maintenance activities and facilities in a comprehensive masterplanned development**	The Zone will change the ruralness of the area but the development areas are not visible when viewed from the surrounding roads. The vista when viewed from the Crown Range Road will change but this change will not be adverse.	The zone will have positive social effects by providing additional high quality golf experience for the District, and local employment	Cultural effects, if they arise, will be addressed and will not be adverse	There are significant opportunities for economic growth – the zone will contribute to satisfying the rapid increase in golf tourism and the high expenditure of golfers visiting the District. The visitor accommodation opportunities will also present significant economic value for the District.	There will be significant employment opportunities arising through the construction and ongoing use of the course, and through the related clubhouse, restaurant and driving range.	Environmental (8) Social (10) Economic growth (10) Employment (10)
Policy 45.2.1.2 **Require development to be in accordance with a Structure Plan to ensure development is appropriately located and does not adversely affect the**	Positive effect – landscape and visual mapping ensure development is subservient to the landscape.			An additional golf course will contribute to the growth of golf tourism in the District.	The resort will create opportunities for specialists in green keeping and maintenance, farming and within the visitor	Provides integration across the zone (9). Co-ordinated provision of servicing (9) Co-ordinated provision of parks and open space (9)

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2313

Policy	Environmental Effects	Social Effects	Cultural Effects	Opportunities for Economic Growth	Employment Opportunities	Quantification of Benefits and Costs (Ranking of 1-10, 1 being low (costs) and 10 being high (benefits)
landscape, recreational, and ecological values and opportunities of the Zone.					accommodation activity area. The buildings of housing and infrastructure required to support the development will provide employment opportunities for tradespeople and suppliers in the District.	Additional layer of information and consent required before development can proceed where necessary (3)
Policy 44.2.1.3 **Protect and enhance the ecological values through enhancement planting and other protection measures.**	Positive effects, allows for the restoration and enhancement of the ecology of the zone.	Positive – requiring a certain percentage of residential planting to be native contributing to the wider restoration project could contribute to a greater feeling of sense of place for the future community.			The initial planting and protection required (fencing etc) will provide employment.	The cost of planting and fencing of areas for restoration and enhancement process (5) Benefits to the environment (10)
Policy 45.2.1.4 **Require built development to be**	Building materials and colours in natural colours will enable					Quality development subservient to the environment (8)

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2313

Policy	Environmental Effects	Social Effects	Cultural Effects	Opportunities for Economic Growth	Employment Opportunities	Quantification of Benefits and Costs (Ranking of 1-10, 1 being low (costs) and 10 being high (benefits)
subservient to the landscape of the Zone and the wider rural environment by managing external materials and colours of all buildings	development to not detract from the landscape.					
Policy 45.2.1.5 **Promote open space and farming activities as the backdrop to the golf course and to maintain landscape values**	Farming has benefits in that is provides a green backdrop to the rural general zone, however, farming can also contribute to environmental issues as a result of high stocking rates and high fertilizer use.		The proposed zoned is part of a much larger farm that has been subdivided over time.	Approximately half of the zone will still be used for farming purposes contributing to economic growth.	A farm manager will be employed to manage the farm while contractors are employed to harvest and cart the Lucerne.	Half of the zone will still be farmed (8) Most of the zone visible to adjacent roads will be farmed (8)
Policy 45.2.1.6 **Provide the opportunity for sustainable water, stormwater, wastewater collection, treatment and disposal practises.**	Sustainable engineering practices have many environmental benefits.					Environmental benefits of sustainable engineering design (8)
Policy 45.2.1.7	Contributes to the connections of area of ecological significance.	Positive – requiring a certain percentage of residential	Positive – assists in improving water quality, native habitat			Ecological benefits to the environment (8)

2313

Policy	Environmental Effects	Social Effects	Cultural Effects	Opportunities for Economic Growth	Employment Opportunities	Quantification of Benefits and Costs (Ranking of 1-10, 1 being low (costs) and 10 being high (benefits)
Require that all landscaping contributes to the ecological diversity and enhancement of the Zone	Contributes to the overall amenities of the site and the wider environment	planting to be native contributing to the wider restoration project could contribute to a greater feeling of sense of place for the future community.				Derived amenity benefits of integrated landscaping (8) Loss of choice for future purchasers in garden design (3)

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12. Conclusion

The proposed changes to the District Plan to create a “Special Zone” will meet the purpose of the Act in that it supports sustainable management.

The Council is promoting the diversification of the economy, The Hogan Gully Zone supports the enhancement and development of the economy in that Golf Tourism is a rapidly growing sector of the tourism industry in the District.

The Special zoning will enable a number of activities that already undertake as part of the Golf Course and its development as well as providing for residential and visitor accommodation in parts of the Zone that can absorb development. This has been established through the extensive reports appended to this submission addressing landscape, infrastructure provision, masterplanning, possible contamination, natural hazards and noise.

The site has been assessed comprehensively in order to create a zone that is sympathetic in its environment and, overall, a sustainable use of the resources of the land.

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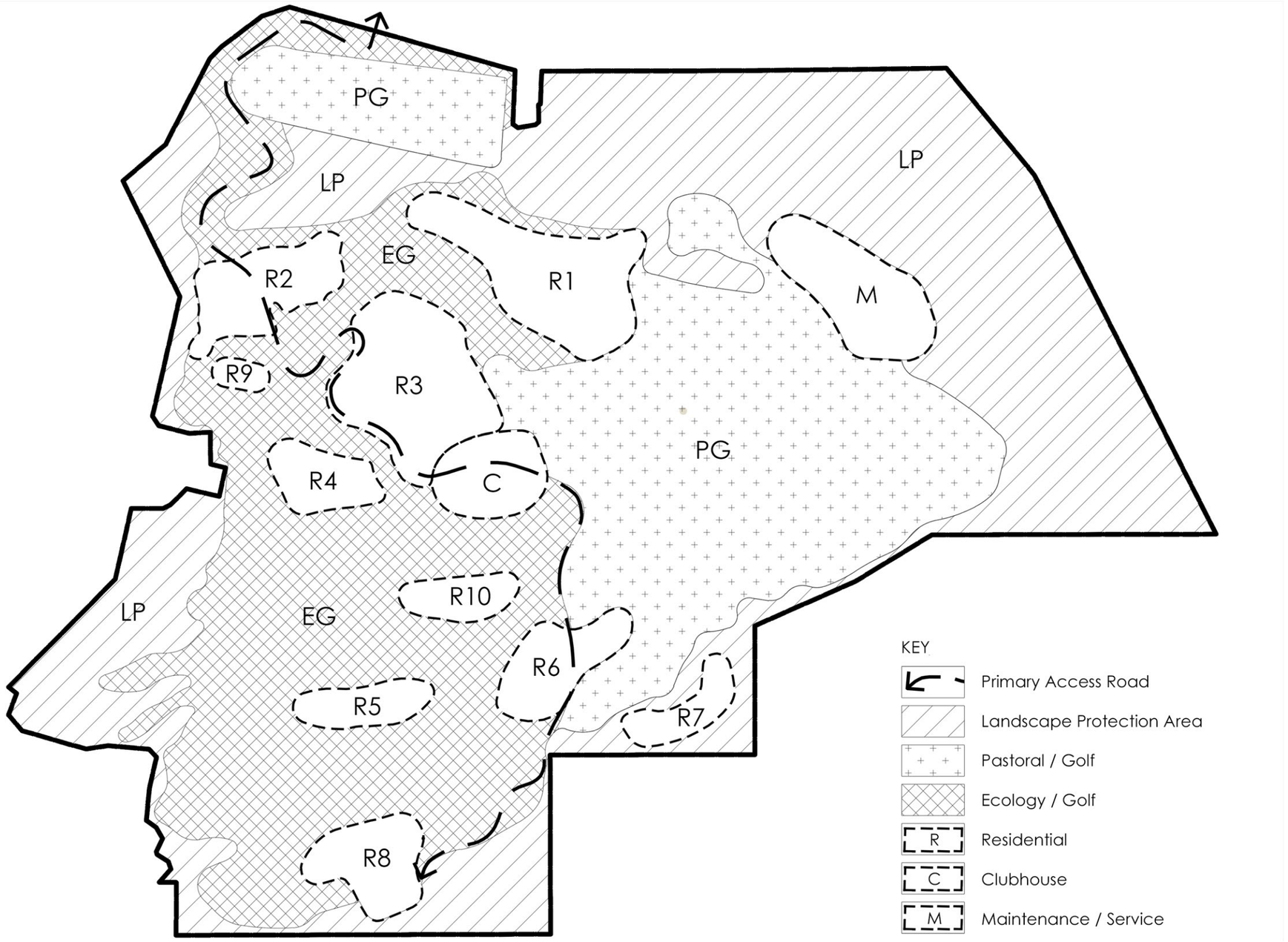
2313

North



baxter design

REFERENCE : 2512-SK131 - SCALE = 1: 7,000 AT A3 - 23 FEB 2018

DRAFT

HOGAN'S GULLY FARM

PROPOSED STRUCTURE PLAN

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2313

North

Driving Range and Golf Academy

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HOGANS GULLY FARM: GOLF CONCEPT MASTERPLAN

baxter design | Pattersons | GTG Greg Turner Golf

REFERENCE : 2512-SK135 - SCALE = 1:5000 AT A3 1:2500 AT A1 - 21 FEB 2018

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2313

Hogans Gully Farming Ltd
Hogans Gully Farm

Landscape Assessment Report

Prepared by
Baxter Design Group

October 2015

Amended version received 26/02/2018

OVERVIEW

1. This proposal is part of a submission to the Queenstown Lakes District Council (QLDC) Notified District Plan (NDP) and seeks to include the proposed development as part of the new Plan. For the full details of the application please refer to the report prepared by Brown and Company Planning Group. Briefly, this application seeks to create pocekts of Rural Residential zones within the Rural General Zone. The site is an amalgamation of 13 properties held in joint ownership, which combined, is approximately 160ha in area. The applicant proposes, as part of the District Plan Review, a structure plan and relevant provisions.

BACKGROUND

2. This report assesses the landscape effects of a proposed development on an area of land referred to in this report as 'Hogans Gully Farm'. This area of land exists between Hogans Gully Road, McDonnell Road, the Lake Hayes - Arrow Junction Road and the Bendemeer Rural Lifestyle Zone. The report includes:

    - A landscape character analysis,
    - A description of the proposed development,
    - Visibility of the proposal,
    - Landscape assessment,
    - Conclusion,
    - Attachments.

LANDSCAPE CHARACTER ANALYSIS

3. The following portion of this report will focus on describing the existing landscape character of the Hogans Gully Farm and surrounds. The amended Pigeon Bay Criteria is used as a guide to assess the landscape character of the site.

    Environment Court Decision C180/99: Amended Pigeon Bay Criteria

    (a) the natural science factors – the geological, topographical, ecological and dynamic components of the landscape;
    (b) its aesthetic values including memorability and naturalness;
    (c) its expressiveness (legibility): how obviously the landscape demonstrates the formative processes leading to it;
    (d) transient values: occasional presence of wildlife; or its values at certain times of the day or of the year;

(e) whether the values are shared and recognised;
(f) its value to tangata whenua;
(g) its historical associations.

(a) Natural Science Factors

4. The site is part of a historic moraine, deposited by the retreat of the Wakatipu Glacier. To the south of the moraine deposit is the roche moutonnée feature of Ferry Hill To the west is the glacier-scoured bed of Lake Hayes and the roche moutonnée feature of Slope Hill. To the north is Hogans Gully, an incised gully which separates the subject moraine from other moraine deposits to the north. To the east of the subject moraine is the Arrow River which has created a series of terraces near the foot of the Crown Terrace escarpment.

5. Geologically speaking it can be deduced that schist is the basement rock as it presents itself in several outcrops in parts of the site. River alluvium also forms part of the site as can be seen in the more easterly portions where obvious river terraces in the vicinity of the Arrow River form the topography.

6. Covered mostly in pasture grass, the site's natural ecology has been heavily modified by human processes. Exotic conifers exist in patches and shelterbelts across parts of the site. Other exotics such as willow and birch occur in the vicinity of the existing residential dwellings and along the margins of riparian areas. These riparian areas also host small numbers of indigenous grasses. Large patches of indigenous grey shrubland, mostly composed of matagouri exist generally on the steeper graded and less accessible portions of land and along the riparian margins of surface waters.

7. For a detailed explanation of the site's ecology please refer to the Ecological Report prepared by Davis Consultants, attached to this application.

(b) Aesthetic Values

8. Certainly, the highest aesthetic values of the site are embodied in its positioning as the foreground to the vista held from a viewpoint at the top of the Crown Range Road Zig Zag. The effects of the proposal on this view will be discussed later in this report. At present the subject site is part of a wider pastoral landscape that covers much of the Wakatipu Basin. This basin is set within the more dramatic mountains which enclose it. It is considered that the site is part of a highly memorable landscape.

9. The naturalness of the site is generally low as most of it is covered in pasture grass and the natural ecology has been reduced to small patches of limited biodiversity. However the landform remains relatively natural and its topography is part of the larger narrative which tells the story of the basin's formation.

(c) Expressiveness

10. The rolling, hummocky lands which characterizes much of the site's more elevated portions express the glacially deposited moraine that formed much of the site. Similarly the linear terraces of the lower, eastern portions of the site express the dynamic relationship between the moraine and Arrow River.

11. The most dramatic and expressive portion of the site is in the central northern portion of the site near Hogans Gully Road. Here the hummocks have been eroded by meltwaters which have created gorge-like features set amongst the hills. This has created a series of narrow valleys enclosed by steep sided, round top knolls.

12. The legibility of these features is not as expressive or accessible to the public as other landforms throughout the basin such as the scoured east-facing moraine terrace face of the Slope Hill – Lake Hayes feature, the incised gorge of the Shotover River or many of the roche moutonnée features. The subject site forms part of a wider moraine deposit which composes much of the basin's topography and the features which express its formative process are common in the basin.

(d) Transient Values

13. Being bound on three sides by three different public roads, the site is most often experienced while in motion in a vehicle. Diurnal changes affect the texture of the site as low sun allows the hummocky topography to cast more shadows.

14. There are patches of deciduous trees, generally limited to areas around existing residential dwellings. The bulk of these trees are birch which in the autumn will display seasonal yellows as they lose their foliage.

15. The colour of the site also changes seasonally. Covered in mostly pasture grass, the site can appear a tawny brown colour in the mid-winter and summer months while in wetter times of year the site can be green in colour. This change in colour is also relative to the areas of land which may be irrigated.

16. Several species of birds have been observed onsite. Most notably harrier hawks patrol much of the sky around the hummocks and fields, searching for prey.

17. Rabbits are present, but not as prevalent on the basin floor as they are on the Crown Range.

18. As stated above, the site can be observed from the Crown Range lookout. It is considered that at certain times of day and in certain climatic conditions the site can have increased or decreased amenity values. For example, as the sun sets in the west the site may be less dominant as the background can be filled with colours and the setting sun which can highlight the view. In the morning as the sun rises from the east the site may be more obviously expressive as the sun cast shadows across the hummocky lands and brings colour to the tawny grasses.

(e) Values Shared and Recognized

19. Many of the values of the site are shared with the adjoining lands. This is attributed to the shared formative process and land uses. What is recognized as being unique to the site is it's adjacency to the Morven Hill roche moutonnée and the river terraces which link the site to the Arrow River.

(f) Values to Tangata Whenua

20. While it is understood tangata whenua lived in parts of the basin seasonally and used the basin, lakes and rivers as they journeyed through, mostly in search of pounamu, there are no know associations with the site directly.

(g) Historical Associations

21. The site is part of a wider landscape which in terms of western human history has been in pastoral use. The first western encounter with the site would have taken place from the top of the Crown Range by the pioneering pastoral farmers, William Rees and Von Tunzlemann. In his memoirs Rees described weeks of battling with spaniards and other unfriendly scrubland to cross the Crown Range in 1860 to witness *'The magnificent panorama of open country. Not perfectly level but broken by small hills and terraces, whilst a large lake stretched away in the distance as far as the eye could see.'*

22. The subject site is part of a much larger pastoral landscape which has been cleared and grazed for over a century.

DESCRIPTION OF THE PROPOSAL

23. Overall, this application seeks to establish pockets of Rural Residential (RR) clusters within the Rural General zone. The RR areas will be located within discrete pockets of land where development can best be absorbed. Design controls will stipulate that each purchaser plants a significant area of their site in indigenous species. Controls of the buildings will require they are of a consistent material, colour and form. The intention of theses controls is to set the residential development within the landscapes more natural values.

Rural Residential

24. All residential areas will be clusters of homes located in areas where they will enjoy a high amenity and have a limited effect on the landform or other existing landscape values. Strict design controls will be imposed on the buildings and landscape design within these lots so the future building appear in character with and subservient to the landscape.

Rural General

25. The Rural General zone will form the remainder of the site. This area will remain mostly unchanged and form part of the landscape Protection zone

Landscape Protection

26. The Landscape Protection area will protect the sites existing natural and rural values. Open areas of pasture outside the proposed RR zone will be unaffected. Areas with significant ecological values will also remain unaffected by this proposal.

LANDSCAPE ASSESSMENT

Landscape Classification

27. As a result of the District Plan Review, the rural areas of the District may be classified as one of three landscapes; the Outstanding Natural Features (ONFs), the Outstanding Natural Landscapes (ONLs) and Rural Landscape Classification (RLC). The existing District Planning Maps shows the subject site as being within the Visual Amenity Landscape (VAL). Regardless of the name of the site's landscape classification, it is certain that it is not part of the ONL's or ONF's which are the dramatic mountains and lakes of the District such as the nearby roche montonnée feature of Morven Hill, the Crown Terrace face and Kawarau River corridor.

28. The following portion of this report will focus on the visibility of the proposal and it's effects on the landscape and visual amenity. This will be followed by a summary of the overall landscape effects of the proposal. This assessment has been considered with particular regard to the objectives and polices contained within Part 6, *Landscapes* and Part 21 *Rural*, as well as the Assessment Matters contained within Part 21 *Rural* of the NDP.

Visibility of Development and Effects on Landscape Character and Visual Amenity

29. The elevated nature of the moraine and terraces which compose most of the site restrict the visibility of the upper portions from most public places. There is however potential for glimpse views from several locations on the valley floor.

30. The most prominent view of the site will be from the zig zag portion (from the Gibbston Highway to the top of the Crown Terrace) of the Crown Range Road; most notably the viewpoint at the top of the Crown Range Road. The following portion of this report is an assessment of the effects of the visibility of the development on the landscape and visual amenity from these viewpoints.

Crown Range Road (Refer Attachment A)

31. Virtually all of the proposed development will be visible form the top of the Crown Range zig zag. This is attributed to the higher elevation of this portion of road. The viewpoint at the top of the zig zag is at approximately 600m AMSL while the highest point of the subject site is 420m AMSL. The eastern edge of the subject site is approximately 1.3km from the viewpoint while the site's more elevated western boundary is approximately 2.6km from the viewpoint.

32. Much of the Wakatipu Basin is also visible from this viewpoint. In the immediate foreground is the Whitechapel Road Rural Lifestyle Zone which hosts a number of residential dwellings with capacity for more residential development. The east facing escarpments that lead down to the Arrow River are also part of this foreground.

33. Beyond the Whitechapel area, looking farther west the subject site and other lands in the vicinity form the fore to mid-ground of this view. The density of development in this area is less pronounced. Buildings are often set within large patches of vegetation which screen much of the development from view. There are exceptions however, including the Mt Soho winery which is a large, light coloured structure set in the middle of more open pasture. Consented developments are taking place in Bendemeer which is existing to the west of the subject site, but many of the approved building platforms have not yet been developed. Morven Hill dominates the view on the southern periphery of this view. Overall the visibility of development

immediately west of the Whitechapel area is low and the rolling hills, river terraces and flatlands are predominantly pastoral in character.

34. Further afield in the mid-ground and periphery of this view, much more development is visible including the resort area of Millbrook, the urban areas of Arrowtown, the rural residential areas of Speargrass Flat Road and parts of Arthurs Point. A sliver of Lake Hayes is visible as is the Slope Hill and Ferry Hill ONFs.

35. The background of this view is dominated by the dramatic, often snow covered mountains including, from north to south, Brow Peak, Coronet Peak, Ben More, Bowen Peak and Ben Lomond.

36. The proposal will see the introduction of clustered residential areas and associated services such as road and fencing to support these activities on the lands that face the Crown Range viewpoint. There is no doubt that the proposed development will alter the existing, virtually untouched pastoral character of the site. The following portion of this report will assess the visual effects of proposal

37. Strict design controls will be applied to the RR areas and the landscaping within properties. These design controls are intended to create a visual consistency of the built form and to set the buildings into the site's natural values. Buildings will appear as subservient to the landscape and landscape controls will extend the more natural pattern of the ecological protection and enhancement areas into the residential lots.

38. As viewed from the top of the Crown Range Road, the residential buildings will read as contiguous and consistent built forms. This is predominantly attributed to the controls and roof forms, material and colour as well as controls on the external cladding material and colour. While the scale, form and overall design of buildings may vary the proposed design controls will support a legible consistent residential development set within the natural values of the site.

39. The RR areas will be encompassed by the Landscape Protection areas and Rural General zone. This will ensure a large portion of the site remains in its existing open character.

40. Overall, while the views of the site as experienced from the Crown Range Road will be altered, it is considered that the change will not diminish the quality of this view. This viewpoint takes in much of the Wakatipu Basin, including

    - portions of golf courses,
    - varying densities of residential development including rural residential, rural lifestyle, low density and urban,
    - open pastoral lands,
    - roche montonnée features
    - vegetated mountain slopes,
    - distant mountains.

41. The proposal will fit into this existing landscape pattern of development. Design controls will see buildings constructed of natural materials and dark colour and set within native vegetation. The bulk of the site will remain in it's existing state.

***McDonnell Road and Centennial Avenue Junction* (Attachment B)**

42. Portions of the proposal may be visible from the junction of the McDonnell Road and Centennial Avenue Junction. This includes the main accessway, the M2 Maintenance Zone, and portions of the R1 and R3 residential zones.

43. There is moderate potential for some buildings within the RR zone to break the ridgeline as viewed from the junction. There is also limited potential for buildings within the RR zone to break the skyline as viewed from this junction. The potential effect of this visibility will be mitigated by specific design controls which will ensure vegetation will form the primary portion of this view with the built form being set behind and screened by mitigation planting.

44. While it may be possible to see some of these buildings from portions of public road in the vicinity of this road junction, the visibility will be limited to short distances along the roads. Topography and existing vegetation will ensure the proposal is not visible at all from Hogan's Gully Road and only visible for a portion of approximately 1.2kms along McDonnell Road. From any views along the public roads east of the proposed development, views will be held through a filter of trees which vary in density and species across the road boundary.

Lake Hayes – Arrow Junction Highway (Attachment C and D)

45. The Lake Hayes – Arrow Junction Highway runs east and south of the subject site. There is limited potential for portions of the RR areas to be visible from the eastern portion of this road but most of the RR areas will be screened by existing topography. Design controls will ensure if any built development within the RR areas is seen from the highway it will be set well within existing and future vegetation and will not be readily perceivable.

The Gibbston Highway (Attachment E)

46. There is potential to view parts of the proposal from a very limited portion of the Gibbston Highway, where the edge of the Crown Terrace and mature trees frames the view to the west. Design controls will ensure these developments appear as subservient to the landscape. They will be recessive and from this distance not readily discernable. Also the proposal will fit into the context of the existing pattern of development and experience of entering the Wakatipu Basin.

CONCULSION

47. From most locations on the valley floor the proposal will be reasonably difficult to see and the existing pastoral lands will remain in the open state. Most development will take place on the upper portions of land where they are visually contained by the landform. Where portions of the development are visible, design controls will ensure buildings are recessive and set within the more natural landscape character, which will be greatly enhanced as part of this proposal.

48. From the Crown Range Road zig zag the site is highly visible. It is accepted that from this road the pastoral landscape will be altered as a result of the proposal. Much of the openness of the landscape will be retained within the golf and open space activity areas. Large areas will be set aside for ecological protection and restoration planting and landscape design controls which require areas of native planting within the residential lots will strengthen the natural

values of the site. It is considered that as viewed from the Crown Range Road, the modified, highly pastoral landscape will take on a more natural character with buildings that are sympathetic to this natural character.

49. Overall, the proposal will maintain the existing landscape values as experienced from the valley floor. As experienced from the Crown Range Road the proposal will positively contribute to the natural character of the landscape while maintaining a high level of open space and a moderate level of pastoral character.

2313

Hogans Gully Golf

Submission to Proposed District Plan

Transport Assessment

October 2015

Amended version received 26/02/2018

2313

Bartlett consulting

Contents

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Amended version received 26/02/2018

1 Introduction

1.1 Background

Hogans Gully Farming Limited proposes to lodge a submission to the Proposed Queenstown Lakes District Council (QLDC) District Plan for an area of land south of Arrowtown bordered by Hogans Gully Road, McDonnell Road and Lake Hayes-Arrow Junction Highway (SH6). The submission seeks to rezone land to allow for development of a golf course and associated visitor accommodation and residential uses.

1.2 Purpose

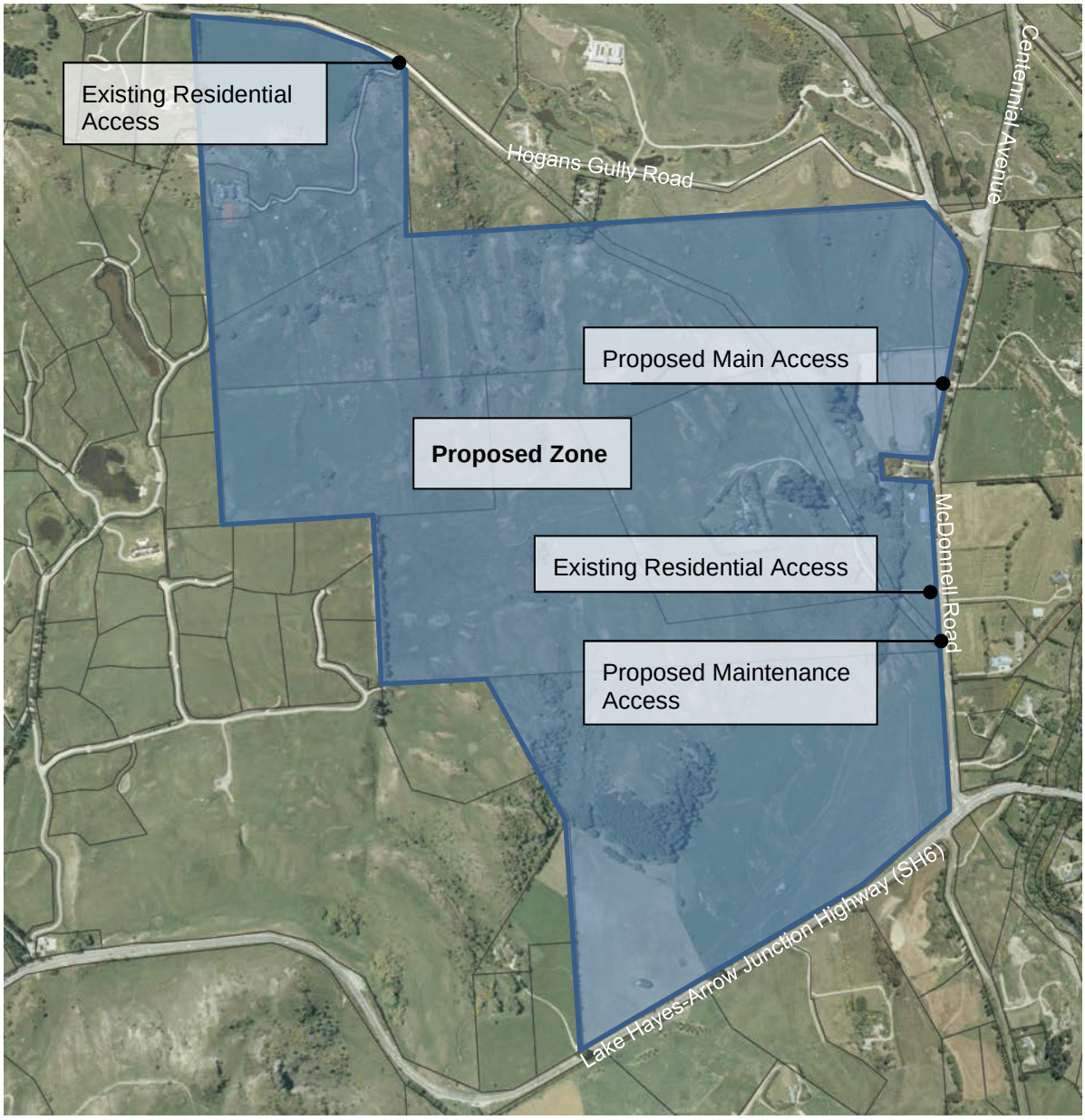
The purpose of this report is to assess the various options for access to the local road network and to identify the appropriate intersection type and form. This assessment will also identify the appropriate design standard for the development of the internal road network. These will be assessed against current standards and the potential transportation effects on the surrounding transportation network.

2 Site

2.1 Location

The land covered by the submission is located south of Arrowtown. It is bordered by Hogans Gully Road to the north, McDonnell Road to the east and Lake Hayes – Arrow Junction Highway (SH6) to the south. The figure below shows the site location and existing property accesses to the site.

Figure 1 – Hogans Gully Golf proposed zone, image from QLDC webmaps.



2.2 Existing Use and Zoning

The site is currently zoned as Rural General in the Operative QLDC District Plan and is currently used for grazing. There are currently two dwellings on the site. The neighbouring properties are farmland with some rural dwellings. To the west the site is bordered by the Bendemeer Special zone.

2.3 Adjacent Transport Network

2.3.1 Road Network

The site has a frontage onto McDonnell Road, Lake Hayes-Arrow Junction Highway (SH6) and Hogans Gully Road. The following provides a details of these roads within the local road network.

McDonnell Road

To the east the site is bounded by McDonnell Road. The site has one residential access, a farm yard access and two farm (paddock) accesses from McDonnell Road.

The section of McDonnell Road that the site will be accessed from is not listed in the District's Road Hierarchy[1] which assumes that it is a Local Road. However, the Road Hierarchy does list Arrowtown Junction Rd - State Highway 6 to 50kmph sign Arrowtown as an Arterial Road. For the purposes of this assessment McDonnell Road is considered as an Arterial Road fulfilling the function of a transport link between Arrowtown and other parts of the District. McDonnell Road is has an 80km/hr speed limit.

Traffic flow data for McDonnell Road is collated by QLDC, Table 1 provides a summary of the latest traffic count data in the vicinity of the site.

Table 1 – McDonnell Road traffic data, source QLDC traffic counts

Site	2005	2008	2011	2014
McDonnell Road between Centennial Avenue and SH6	2119	2348		
Centennial Avenue between 100km/hr sign and McDonnell Road[2]		2037	1998	2370

This traffic count data is provided as Average Daily Traffic (ADT). The latest count on the section of McDonnell Road that passes the site was done in 2008. QLDC have a regular traffic monitoring site on Centennial Avenue to the north of the intersection with McDonnell Road which provided a good indication of recent traffic flow in the area. This Centennial Avenue data shows an average annual increase of approximately 2.5% since 2008. This suggests that the current (2015) ADT on McDonnell Road near to the site is estimated to be approximately 3,000vpd (vehicles per day).

Lake Hayes-Arrow Junction Highway (SH6)

At the south-east corner of the site McDonnell Road intersects with SH6. SH6 extends along the southern boundary. The site has two farm (paddock) accesses from SH6, these accesses are not regularly used. SH6 is a Limited Access Road (LAR), these accesses are registered crossing places.

[1] Refer Operative QLDC District Plan, Appendix 6 Road Hierarchy.
[2] The data provide is an average of a number of counts over the year.

As a state highway this road provides a regional route between Southland to the south and Central Otago to the north and is managed by NZTA.

Traffic flow data for SH6 is collated by NZTA, Table 2 below provides a summary of the latest traffic count data in the vicinity of the site.

Table 2 – SH6 Traffic Count Data, source NZTA State Highway Traffic Data Booklet 2014

Site	2010	2011	2012	2013	2014
Between Crown Range Road and Whitechapel Road RP 983/0.61 (ID:00600984)	5704	5775	5608	6130	6645
East of Strains Road RP 983/4.66 (ID:00600988)	8345	8058	8492	8747	9102

This traffic count data is provided as Average Annual Daily Traffic (AADT). This data shows a five year annual growth rate of nearly 9% at the Crown Range Road site and only 4% at the Strains Road site. This suggests that the current (2015) AADT on SH6 at the site is approximately 7500vpd.

SH6 has a 100km/hr speed limit for the majority of the frontage length. The speed limit reduces to 80km/hr on approach to the intersection with McDonnell Road.

Hogans Gully Road

To the north a portion of the site bounds Hogans Gully Road. The site has one residential access and two far (paddock) accesses from Hogans Gully Road.

Hogans Gully Road is not listed in the District's Road Hierarchy[3] which assumes that it is a Local Road. Along the site boundary the road is unsealed although otta seal has been applied at some locations as a dust suppressant. Hogans Gully Road has a speed limit of 80km/hr although due to the unsealed road surface it is possible that the operating speed is below the posted speed limit.

Traffic flow data for Hogans Gully Road is collated by QLDC, Table 3 provides a summary of the latest traffic count data in the vicinity of the site.

Table 3 – McDonnell Road traffic data, source QLDC traffic counts

Site	2005	2008	2012
Hogans Gully Road between End of seal and McDonnell Road	195	144	133

This traffic count data is provided as Average Daily Traffic (ADT). This suggests that the current (2015) ADT on Hogans Gully Road near to the site is likely to be less than 250vpd.

[3] Refer Operative QLDC District Plan, Appendix 6 Road Hierarchy.

2.4 Alternative Transport Networks

2.4.1 Bus Services – Public Transport

There are no public bus routes that pass the proposed site. The nearest bus route is operated by Connectabus. This service runs from Arrowtown to Queenstown (via Arthurs Point or Lake Hayes depending on the service). There are no current plan to extend the bus service to include McDonnell Road.

2.4.2 Walking and Cycling

There are no formal pedestrian or cycle routes that directly pass the site. McDonnell Road in this location has an 80km/hr speed limit has narrow shoulders, maximum 500mm, this is considered to be too narrow for pedestrians and cyclists. Pedestrians and cyclist would be expected to share the road with vehicles, which given their likely speeds would not be comfortable.

It is noted that there is a section of footpath on McDonnell Road and Centennial Avenue to the north of the site. This provides a pedestrian link between the site boundary and Arrowtown via either McDonnell Road or Centennial Avenue. The Centennial avenue footpath has a link to the Arrow River Trail via an unnamed legal road to the north.

The Arrow River Trail passes the end of McDonnell Road adjacent to the intersection with SH6. At this location the Arrow River Trail follows Arrow Junction Road towards Morven Ferry.

3 Submission to the Proposed QLDC District Plan

The submission seeks to zone land to allow for development of a golf course and associated visitor accommodation and residential uses. It is anticipated that the development of this area will include central facilities to complement the golf course such as a restaurant and pro-shop. These are expected to boutique in nature and scale.

The following Table 4 outlines the activities and scale anticipated within the zone.

Table 4 – Proposed on-site Activities

Activity	Size
Residential Sections	32 to 45 sections
Lodge (Visitor Accommodation)	50 to 80 rooms
Clubhouse (café/restaurant)	Size unknown
Golf Course (including Maintenance)	18 holes

It is expected that the majority of the on-site activity would be accesses from a single (main) access from McDonnell Road. There will be secondary accesses such as residential accesses from McDonnell Road and Hogans Gully Road, these accesses are currently used as residential accesses. There are currently a number of farm (paddock) accesses from SH6, McDonnell Road and Hogans Gully Road. These are expected to remain as paddock accesses although these may be rationalised or upgraded to meet current standards as part of the future on-site development.

3.1 Traffic Generation

The proposed zone would enable development of a golf course with surrounding visitor accommodation and residences.

3.1.1 Published Traffic Generation Rates

The current New Zealand document that could be used to gain an understanding of likely traffic generation for developments is NZTA Research Report 453 (RR453), Trips and Parking Related to Land Use (2011).

This document provides design peak hour and daily traffic flows for individual activities. The rates are a quick, initial value based on activity. These rates are appropriate when considering specific activities and traffic generation for particular facilities and are used to gain an overall perspective of the likely traffic generation. To allow for multiple related activities within the same site average traffic generation figures have been considered. The following Table 5 provides the average traffic generation rates from RR453.

Table 5 – Average Traffic Generation Rates from RR453[4]

Activity	Peak Hour	Daily
Residential Sections (Inner Suburban)	1.1 /dwelling	9.5 /dwelling
Lodge (Visitor Accommodation)	0.8 /room	4.8/room

RR453 does not provide a trip generation rates for golf course elements of the proposed zone. The traffic generation for the golf course element is to be considered separately.

3.1.2 Golf Course Traffic Generation

The golf course is to be open to the public as well as being available for guests and residents. It is anticipated that the course will cater for visitors to the Wakatipu who would visit a number of other golf course within the district such as Millbrook, Queenstown (Kelvin Heights), Frankton, The Hills and Arrowtown. These visitors would typically travel as a small tour group using vans or small busses or alternatively individual travellers in cars.

The golf course is expected to attract up to 500 customers per day, typically (on average) this is likely to be only 300 customers per day or approximately 120 vehicles to the site, resulting in a traffic flow 240vpd. It is possible that this could have a peak during the midday period (11:30am to 2:00pm), the peak hourly traffic flow could be up to 60vph.

In addition the golf course will have traffic associated with maintenance staff and servicing. There will be approximately 20 staff associated with the maintenance of the golf course typically 75% of staff will commute to work be car the remaining either sharing a ride with colleagues or choosing other transport modes, cycling from Arrowtown would be a viable travel mode to this site, staff vehicle movements, 30vpd. Servicing would include delivery of parts or materials as well as specific personnel to service on-site equipment. It is possible that servicing could typically include 10vpd, and a likely midday peak traffic flow of 6vph.

The total golf course traffic generation is likely to be typically 280vpd with a daytime peak traffic flow of 66vph.

3.1.3 Combined Traffic Generation

The following Table 6 provides a summary of the likely traffic generation as a result of the proposed development.

Table 6 – Assessed Peak Hour and Daily Traffic Flow, based on NZTA RR 453

Activity	Units	Peak Hour	Daily
		vph (vehicles per hour)	vpd (vehicles per day)
Residential sections	45 sections	50 vph	428 vpd
Lodge	80 rooms	64 vph	384 vpd
Golf course	18 holes	66 vph	280 vpd
	Total		**1092 vpd**

[4] Refer NZTA Research Report 453 (RR453) Trips and Parking Related to Land Use (2011), Appendix C Current New Zealand trip generation and parking demand, Table C.1 New Zealand trip generation and parking demand.

It is noted that the club house traffic generation has not been considered separately. The traffic for the clubhouse as a café/restaurant is considered as part of the on-site development within the visitor accommodation and golf course elements. It is expected that the within these elements there is sufficient flexibility to cover vehicle trips that would be only a result of the club house.

Within Table 6 above the total peak hour traffic generation is not provided. This is because the different on-site activities will have different peak times. For the purposes of intersection design it is suggested that the peak hour traffic generation is likely to occur during the daytime period (10:00am to 4:30pm). During this time period the likely peak hour traffic flow is estimated to be 100vph.

For the purposes of this assessment the maximum level of on-site development have been considered in order to establish a worst case level of on-site development and likely traffic generation. This approach will enable for a conservative approach to the assessment of likely access types.

The traffic flow through at the main development access from McDonnell Road would be significantly greater than 200vpd[5]. It is suggested that this access is considered to be a high volume access and should therefore be considered as an intersection.

It is likely that proposed on-site activity would attract large groups travelling by bus and/or coach vehicles. The access intersection should consider use by these vehicle types.

3.2 Access

3.2.1 Existing Farm Accesses

There are a number of existing farm accesses to paddocks (from Hogans Gully Road, McDonnell Road and SH6) and one to the farm yard from McDonnell Road. It is not anticipated that the proposed activities will have any effect on the operation of these existing accesses. Two of these accesses are from SH6, these are authorised crossing places within the LAR status of SH6.

It is recommended that the existing accesses are rationalised or upgraded to current standards as part of the on-site development. This may include closure of some of these accesses which do not meet minimum visibility sight distance requirements for their use.

3.2.2 Residential Accesses

There are two existing residential accesses each providing access to a single residential home, one from McDonnell Road and one from Hogans Gully Road. These are to remain as residential accesses.

It is possible that the number of residential properties served by these accesses could be increased. It is expected that these accesses could serve either:

- Up to six residential dwellings as a shared private access to the minimum requirements of the Operative QLDC District Plan[6] and New Zealand Standard NZS4404:2010 Land Development and Subdivision Infrastructure. This would include a minimum access width of 2.5m with passing opportunities every 50m, or

[5] Low volume access has less than 200vpd based on NZTA document Guidelines for visibility at driveways (RTS 6), 1993.
[6] Refer Operative QLDC District Plan, Section 14 Transport for full compliance details of a residential access.

- Up to twenty residential dwellings as a shared access (less than 200vpd) based on the minimum requirements of NZTA document (then Land Transport Safety Authority) RTS 6, Guidelines for visibility at driveways (1993, reprinted 1998 & 2001) and New Zealand Standard NZS4404:2010 Land Development and Subdivision Infrastructure. This would include an access width of between 5.5m-5.7m width allowing two directional traffic flow.

It is recommended that any proposed residential access is designed in order to comply with current standards. The existing residential accesses can be constructed to comply with these standards and are considered to be appropriate as residential accesses.

3.2.3 Maintenance Access

The proposed zone will include a maintenance area to the south. This will be accessed from McDonnell Road approximately 300m north of the McDonnell Road intersection with SH6. This new access will be formed as a private access and will meet the minimum requirements of a commercial access within the Operative QLDC District Plan including layout and visibility requirements.

3.2.4 Main Access

A new access is to be formed from McDonnell Road which will cater for the majority of on-site activities including residential dwellings, visitor accommodation and the golf course including associated facilities such as a club house. It is like anticipated that this access would be used by large vehicles (buses and coaches) as well as visitors who are not familiar with the local road network.

Due to the anticipated traffic generation it is recommended that this main access is designed in accordance with Austroads Guide to Road Design – Part 4A: Unsignalised and Signalised Intersections (2010). An initial assessment has been undertaken using the warrant for turn treatments[7] within this guide. This assessment is based on the predicted traffic generation and the existing traffic flow on McDonnell Road. This shows that an initial intersection would require widening for right turn traffic and left turn traffic (basic rural turn treatments). However, when considering traffic growth on McDonnell Road it is likely that the future traffic flows will require a right turn lane to be formed at the access intersection.

The anticipated operating speed of McDonnell Road is 90km being 10% greater than the posted speed limit. The minimum Safe Intersection Sight Distance (SISD) for this operating speed is 214m [8] with a reaction speed of 2 seconds.

The visibility sight distance at the proposed access location has been reviewed, this is located 25m north of the existing access opposite and 245m south of the Intersection of McDonnell Road and Centennial Avenue. To comply with minimum SISD requirements the main access may be located between 245m and 150m to the south of the McDonnell Road/Centennial Avenue intersection.

It is recommended that the main access will include seal widening to accommodate a future right turn lane. This intersection layout will provide sufficient flexibility to cater for current and future traffic flows at the main access intersection.

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[7] Refer Austroads Guide to Road Design – Part 4A: Unsignalised and Signalised Intersections (2010), Figure 4.9 Warrants for turn treatments on the major road at Unsignalised intersections, using Design Speed < 100km/hr.

[8] Refer Austroads Guide to Road Design – Part 4A: Unsignalised and Signalised Intersections (2010), Table 3.2 Safe intersection sight distance.

4 Internal Transport Network

4.1 Vehicular – Roading network

The internal roading network can be managed through the design process. The Operative QLDC District Plan identifies a number of transportation objectives which should be considered during the development of engineering designs for a development. The current concept only provides basic details of the internal road network. It is recommended that the internal road network is to be constructed in accordance with the current New Zealand Standard, NZS4404:2010 Land Development and Subdivision Infrastructure. Generally, the internal road network would be based on the appropriate place context which is considered to be rural live and play[9]. A major element of the internal transportation infrastructure would be designing the main access road to accommodate bus and coach vehicles.

An important element of internal street design will be consideration of street lighting. The proposed zone is within a rural environment. It is therefore recommended that the level of street lighting is minimised in order to reduce any effects of light overspill on the surrounding environment. To manage the design of street lighting elements within the internal road network should be developed in accordance with the QLDC lighting strategy; Southern Light. An appropriate level of street lighting may be to only consider flag lighting at intersections and bollard lighting to identify pedestrian routes in a similar manner as provided at Jacks Point.

4.2 Walking and Cycling

The internal transport network is likely to be designed in accordance with NZS4404:2010. With lower volume roads which would be anticipated by the proposed on-site activities cycle facilities would be shared with vehicular traffic within the movement lane.

The New Zealand Standard (NZS4404:2010) includes footpaths only with higher traffic volumes. It is recommended that separate footpath networks are considered for internal access throughout the various activity areas proposed.

It is recommended that the development of internal pedestrian and cycle networks are managed through the planning process as this proposed zone is developed. The objective should be to provide an internal pedestrian and cycle network that provides circulation throughout the build area with minimal interaction with vehicular traffic.

[9] Refer New Zealand Standard, NZS4404:2010 Land Development and Subdivision Infrastructure, Table 3.2 – Land use and area type matrix describing typical place and transport context.

5 Transport Effects

5.1 On-site Transport Effects

The on-site transport effects can be managed through the design and planning process. The Operative QLDC District Plan identifies a number of transportation objectives which should be considered during planning and engineering of the on-site development. It is expected that any on-site traffic effects would be managed through planning approvals for development within the proposed zone.

5.2 Off-site Transport Effects

The off-site transport effects are likely to be a result of additional traffic within the roading network from the proposed zone. The effects that are likely to be noticeable are:

- Traffic at the accesses to the proposed zone from McDonnell Road, Hogans Gully Road and SH6, and
- Traffic on the nearby local road network and possible at the nearest SH6 intersection with McDonnell Road.

An assessment of these effects, and conditions to minimise any adverse impacts are provided below.

5.2.1 Access Traffic

There is likely to be a number of accesses to the proposed zone. These will include farm access (paddock and yard) which will remain, it is possible that these will be upgraded or rationalised as part of any future development. The proposed zone will not increase the amount of traffic at these farm accesses. The transport effects at these farm accesses as a result of proposed zone are considered to have no impact on the operation and safety of the local road network.

There are two existing residential accesses each providing access to a single residential home, one from McDonnell Road and one from Hogans Gully Road. These are to remain as residential accesses. It is possible that the number of residential properties served by these accesses could be increased. To manage any effects at these accesses it is recommended that any proposed residential access is design in order to comply with current standards. The existing residential accesses can be constructed to comply with these standards and are considered to be appropriate as residential accesses. Any transport effects as a result of increased traffic at the residential accesses can be managed through design and the planning process. Any impacts of the residential accesses are considered to be less than minor.

The proposed zone would be predominantly accessed from McDonnell Road from a new main access to be developed between 150 and 245m south of the intersection of McDonnell Road and Centennial Avenue. It is recommended that this new main access is designed as an intersection to comply with the Austroads guidance. To accommodate traffic growth within the local road network this is likely to require sufficient road widening on McDonnell Road to accommodate a future right turn lane. Any transport effects as a result of traffic at the main access to the zone can be managed through the design and planning process. If the main access is designed and constructed to comply with current guidelines and standards it is considered that any impacts will be less than minor.

5.3 Network Traffic

The anticipated traffic flow will have a minimum effect on the local road network. It is likely that the greatest effects would be at the nearby intersection of McDonnell Road and SH6 as a result of additional turning traffic. The SH6 intersections with McDonnell Road includes both left turn and right turn lanes. There are no documented operational issues at this intersection. It is expected that only a minor proportion of development traffic would use this intersection, less than 200vpd[10]. It is anticipated that this will have a minimal effect on the operational efficiency of this intersection.

The intersection of SH6 with McDonnell Road has reduced visibility sight distances in each direction, the speed limit at this intersection is also reduced to maintain safety.

Additional traffic as a result of the proposed zone will have minimal effect on the efficiency and safety of the local road network. It is expected that the resultant transport impacts of the proposed zone will be less than minor.

[10] Based on only 20% of development traffic utilising the SH6 intersection, assumed that 80% of development traffic would be towards Arrowtown.

6 Summary

Hogans Gully Farming Limited propose to submit to the Proposed Queenstown Lakes District Council (QLDC) District Plan to rezone an area of land south of Arrowtown. The land is bordered by Hogans Gully Road to the north, McDonnell Road to the east and Lake Hayes-Arrow Junction Highway (SH6) to the south.

The site is currently zoned as Rural General, the proposed zone would allow for development of a golf course and associated visitor accommodation and residential uses.

The main access to the proposed zone would be from McDonnell Road via a new access. It is recommended that this access is designed in accordance with current Austroads design guidance. An initial assessment identifies that this access intersection should be designed to include sufficient widening on McDonnell Road to accommodate a future right turn lane. This design would accommodate future traffic growth on McDonnell Road and the anticipated development traffic. Design of this access will minimise any possible transport effects.

In addition the proposed zone could increase the amount of traffic at two existing residential accesses, one from McDonnell Road and one from Hogans Gully Road. These accesses would be designed in accordance with the Operative QLDC District Plan. Design of these accesses in accordance with the Operative QLDC District Plan and any other relevant guidance/standards will minimise any possible transport effects.

Overall, with appropriate design any potential adverse effects of the proposed zone can be minimised. It is expected that the resultant transport impacts of the proposed zone will be less than minor.

2313

410 McDonnell Road, Arrowtown Preliminary Site Investigation

Hogans Gully Farming Limited

December 2017

Arrow Lane Arrowtown 9302
www.e3scientific.co.nz

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410 McDonnell Road, Arrowtown
Preliminary Site Investigation

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

Executive Summary

Hogan's Gully Farming Limited (HGFL) is seeking resource consent for the development of a golf course and clusters of residential lots on a 158 hectare parcel of land located on Hogans Gully Road and McDonnell Road, within the Wakatipu Basin (see Figure 1 below).

The proposed landuse change and earthworks associated with the golf course are activities that potentially trigger the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (the NESCS). In order to determine the activity status of the proposed development under the NESCS, HGFL commissioned e3Scientific Limited (e3s) to undertake a Preliminary Site Investigation (PSI) to review the landuse history of the site, identify any potential contaminant risks and determine the need for any further investigation on the site.

The scope of work completed during the PSI included the following:

- Review of land use history including historic aerials, property file and historic certificates of title.
- Review of the existing physical environment.
- Completion of a visual site inspection to examine the condition of the site.
- Based on research into the activities undertaken on the site, consideration of activity status of the proposed development under the NESCS, the risk to human health that may be associated with the proposed land use and the need for any further assessments of the site.
- Through the use of an X-Ray Fluorescence (XRF) tool confirm arsenic concentrations are below the NESCS residential contaminant standard.
- Preparation of a PSI report in accordance with the requirements of the Contaminated Land Management Guidelines (CLMG) No. 1 (Ministry for the Environment, 2003a).

The PSI has identified a number of current and historic activities that have occurred on the HGFL farm that are listed on the HAIL including the former sheep yards, footbath located adjacent to McDonnell Road and the farm landfill. All of these activities can result in an impact to soil quality and can present a risk to human health should people be exposed to the soils. The proposed golf course

and residential development areas will not disturb soils in the vicinity of this farming infrastructure and it is highly unlikely golfers or future residents will interact with these areas of the farm.

The PSI has identified that the broadacre application of fertilisers and pesticides may have occurred, however territorial and regional authorities generally do not consider this to be a HAIL activity. Notwithstanding this point, e3scientific can confirm that broadacre applications can result in trace levels of contaminants in soils, however it is highly unlikely concentrations are present that would present a risk to human health under a residential landuse scenario.

The PSI has also assessed background arsenic levels in sols across the areas of proposed residential clusters. The XRF soil survey found arsenic levels to be relatively consistent, representative of background concentrations and below the NESCS residential soil contaminant standard.

Based on the findings of the PSI, e3scientific concludes that it is highly unlikely there is a risk to human health associated with the proposed golfing and residential activities and the landuse change is considered permitted under regulation 8(4) of the NESCS. Furthermore, the HAIL land identified on the HGFL farm will not be disturbed by earthworks required for development activities. e3scientific therefore considers earthworks are not subject to the provisions of the NESCS.

1 Introduction

1.1 Purpose

Hogan's Gully Farming Limited (HGFL) is seeking resource consent for the development of a golf course and clusters of residential lots on a 158 hectare parcel of land located on Hogans Gully Road and McDonnell Road, within the Wakatipu Basin (see Figure 1 below).

The proposed landuse change and earthworks associated with the golf course are activities that potentially trigger the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (the NESCS). In order to determine the activity status of the proposed development under the NESCS, HGFL commissioned e3Scientific Limited (e3s) to undertake a Preliminary Site Investigation (PSI) to review the landuse history of the site, identify any potential contaminant risks and determine the need for any further investigation on the site.

e3Scientific's experience in the provision of contaminated land services is provided in Appendix A.

1.2 Scope of Work

The scope of work completed during the PSI included the following:

- Review of land use history including historic aerials, property file and historic certificates of title.
- Review of the existing physical environment.
- Completion of a visual site inspection to examine the condition of the site.
- Based on research into the activities undertaken on the site, consideration of activity status of the proposed development under the NESCS, the risk to human health that may be associated with the proposed land use and the need for any further assessments of the site.
- Through the use of an X-Ray Fluorescence (XRF) tool confirm arsenic concentrations are below the NESCS residential contaminant standard.

- Preparation of a PSI report in accordance with the requirements of the Contaminated Land Management Guidelines (CLMG) No. 1 (Ministry for the Environment, 2003a).

1.3 Limitations

The findings of this report are based on the Scope of Work outlined above. e3 Scientific Limited (e3s) performed the services in a manner consistent with the normal level of care and expertise exercised by members of the environmental science profession. No warranties, express or implied, are made. Subject to the Scope of Work, e3s's assessment is limited strictly to identifying the risk to human health based on the historical activities on the site. The confidence in the findings is limited by the Scope of Work.

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

2 Site Location and Description

2.1 Site Location

The site is located northwest of Arrow Junction and is bounded by Hogans Gully Road to the north, McDonnell Road to the east and the Lake Hayes-Arrow Junction Highway to the south (see Figure 1).

The site under investigation is approximately 158 hectares and is legally described as Sec 2 SO 440817, Lots 3-5 DP 18290, Lot 3 4 DP 356270, Sec 99 Pt Sec 100 Blk VII Shotover SD and Lots 1 2 DP 356270.

Central coordinates for the site are: 5011550 S 1272156 E (NZTM).

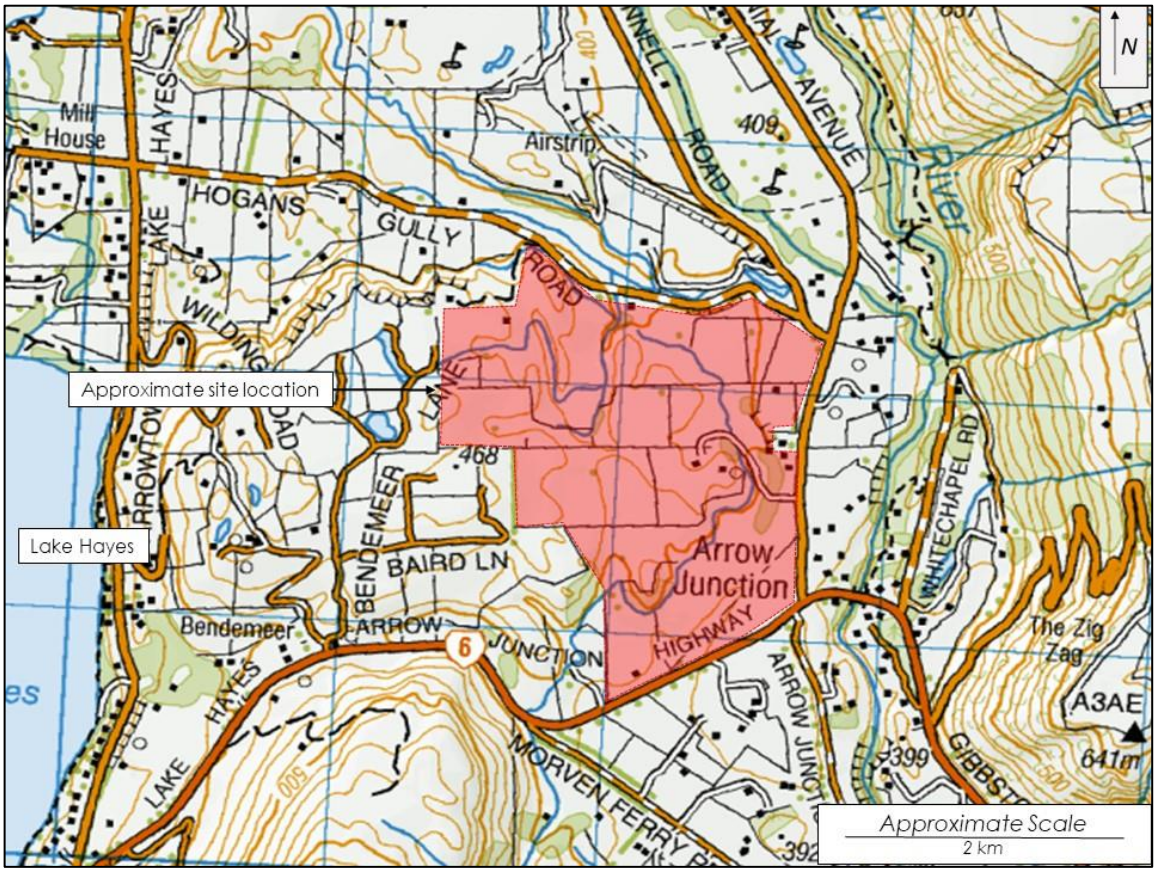

Figure 1: Site Location

Source: Topomap, 2017

2.2 Site History

The history of the site has been determined from:

- a review of historical certificate of titles (provided in Appendix B);
- historical aerial photography (provided in Appendix C);
- property files at the Queenstown Lakes District Council (QLDC); and,
- information provided by Otago Regional Council (ORC).

2.2.1 Historic Certificate of Title Review

Historically the site was made up of eight sections.

Section 1: The first title was issued to Charles Low (OT77/110) in 1885 and was then sold several times through till 1981 where it was then transferred to Walter Reid Jackson in 1981 and then Francis Jackson, Macassey and Marsh in 1987.

Section 3: The first title was issued to Jans Hanson (OT47/179) in 1878 followed by a new title then issued to Charles Swann an Arrowtown Farmer which was then transferred to Walter Reid Jackson in 1981 and then Franscis Jackson, Macassesy and Marsh in 1987. A new title was issued in 1987 to Francis Jackson, Macassey, and Marsh in 1987 (OT10D/418).

Section 4: The first title was issued to Jan Hanson in 1878 (OT47/179) followed by a new title issued to Charles Swann an Arrowtown Farmer in 1937 (OT281/55) which was then transferred to Walter Reid Jackson in 1981 and transferred again to Francis Jackson, Macassey, and Marsh in 1987. A new title was then issued to Francis Jackson, Macassey and Marsh in 1987 (OT10D/417).

Section 26: The first title was issued to Peter Henderson (OT75/21), a farmer, and was then acquired by Charles Low in 1895. Title was then transferred to several further owners until 1981. A new title was issued in 1981 to Stacey Radford of Hawarden (OT8D/149). This title was then transferred to Francis Jackson, Macassey and Marsh in 1987.

Section 26A: The first title issued to Peter Henderson (OT92/204) and then to several further owners until 1981 where title was transferred to Walter Reid Jackson in1981. The title was then transferred to Francis Jackson, Macassey and Marsh in 1987.

Section 27: The first title was issued to Charles Low (OT77/109), and was transferred to several more owners until 1981. A new title was issued in 1981 to Stacey Radford of Hawarden (OT8D/150) which was then transferred to Francis Jackson, Macassey and Marsh in 1987.

Section 60: The first title was issued to Jans Hanson in 1878 (OT47/179) followed by new title issued to Charles Swann, an Arrowtown farmer, in 1937 (OT281/55). The title was then transferred to Walter Reid Jackson in 1981 and Francis Jackson, Macassey and Marsh in 1987. The title was then cancelled in 2011.

Section 67: First title issued to 1886 to Charles Low (OT79/176) in 1886. The title was transferred though several more owners before being transferred to Walter Reid Jackson in 1891 and Francis Jackson, Macassey and Marsh in 1987.

During the 1990s, two new titles were issued following new surveys. These were OT17D/659, OT17D/660 both to Hogans Gully Farming Limited. Three additional updated titles were issued in 2004 (138690), 2005 (229447), and 2011 (573582), all to Hogans Gully Farming Limited.

In addition to the titles, there are several historic survey maps which appear to have been drawn up to show the boundary between agricultural land and an auriferous reserve. It is unclear if the site was ever mined. From the title and survey info, the site has been farmed, commencing likely from the 1860s. It is thought that historically there has been no farm buildings on the sections and the site was merely running stock or growing fodder on the paddocks.

2.2.2 Historic Aerial Review

A review of historic aerials of the site was completed and photos can be found in Appendix C. Historic aerials dated 1956, 1960, 1964 and 1983 were sourced from Retrolens.nz. Aerials from 2004 to 2016 were sourced from Google Earth © 2017 DigitalGlobe.

The earliest aerial photograph was taken in 1956 and shows a residential dwelling just outside the eastern boundary of the property and is surrounded by sheds. All of the sheds are located within the site boundary. The image also shows another shed structure in the far western paddock. The site is predominately covered in pasture with some small shrubs and larger trees.

A review of the 1960 aerial shows the residential dwelling and the sheds along the eastern boundary from the 1956 aerial are still present. The shed structure in the far western paddock is no longer visible. A new shed structure is visible towards the far southern boundary.

The 1964 aerial image appears the same as the 1960 aerial with the addition of a set of sheep yards which are visible along the eastern boundary.

The 1983 aerial shows a woolshed present along the eastern boundary which is still present today. Other landuses are consistent with the 1964 aerial.

An aerial from 2004 shows the presence of a residential dwelling in approximately the middle of the site along with a new shed situated to the east of the house. A small deer shed and holding pen is visible in the north eastern paddock. The woolshed, sheep yards, two sheds and residential dwelling are visible along the eastern boundary.

HAIL activities identified as part of the historic aerial review include the sheep footbath, the former sheep yards and possible storage of agrichemicals in sheds.

2.2.3 Queenstown Lakes District Council Property File Review

A review of the QLDC eDocs for the property was completed which included the following documents:

- Resource consent application RM090574 to construct an extension to a dwelling.
- Resource consent application RM930197 cancelled.
- Building consent application BC091054 to addition to existing dwelling.
- Building consent application BC091054A to amendment to change roof detail, door sill detail and revised window and door timber and revised timber floor system.

2.3 Additional Site Information

The CLMG No 1 requires information associated with recorded discharges and onsite and offsite disposal locations. e3Scientific requested a search of the ORC records for Landuse and Site Contamination Status, Resource Consents, and Resource Management Act (RMA) incidents for the site. The Otago Regional Council stated the following:

"The above land does not currently appear on the database. If your enquiry relates to a rural property, please note that many current and past activities undertaken on farms may not be listed on the database, as they can be more difficult to identify. Activities such as use, storage, formulation, and disposal of pesticides, offal pits, landfills, animal dips, and fuel tanks have the potential to contaminate land. Similarly, the long-term use of lead-based paints on buildings can, in some cases, cause soil contamination. The use of lead-based paint is generally not recorded on the database".

The following list provides a summary of additional information that the CLMG No. 1 (Ministry for the Environment, 2003a) indicates should be included in a site investigation report:

- Presence of drums – no drums were observed.
- Wastes – no waste was observed.
- Fill materials – no fill material.
- Odours – no odours were noted.
- Flood risk – according to the QLDC Webmaps, the site is not located in a flood hazard area.
- Surface water quality – water in the irrigation race was clear during site inspection.
- Site boundary condition – the northern, eastern, western and southern boundaries were all fenced during site inspection.
- Visible signs of contamination – no visible signs of contamination.
- Local sensitive environments – the nearest sensitive environment is the irrigation race which flows through the property. The much larger Arrow River is approximately 350 m east of the site.

2.4 Site Condition and Surrounding Land Uses

The site is accessed off McDonnell Road, along the eastern boundary. The site is undulated and covered with pasture grass, pea crops and small areas of shrubland. Landuses surrounding the site consist of sparsely spaced residential dwellings. General site photos can be found in Plates 1-8. Figure 2 presents the current site layout.

The site is bounded by Hogans Gully Road to the north, McDonnell Road to the east and the Lake Hayes-Arrow Junction Highway to the south. All boundaries are fenced with a stock wire and post fencing. A small number of stock were noted grazing during site inspection. Situated approximately in the middle of the site is a residential dwelling, one small irrigation race and a newly built storage shed. Along the eastern boundary of the site is the farm hub that includes a woolshed which is currently being used as a storage area (Plate 6), associated yards and a sheep footbath.

Approximately 400 m north of the main farm hub is a deer shed and holding pens (Plate 8).

All historic farm infrastructure is well removed from any of the proposed residential or golf course development. During the site investigation it was noted that the site was generally well kept and clean with no visible signs of contamination.

Discussions with the current property lease holder confirmed that superphosphate is currently applied bi-annually and thought the site is unlikely to have historically received applications of superphosphate. The lease holder is unaware of any historic sheep dips and additional landfills/offal pits on the property. During the site walkover a landfill/offal pit was located within the southwest portion of the site. The contents of the landfill were confirmed to be farm waste including offal, bale wrap, cardboard, timber and some domestic waste (see Plate3).

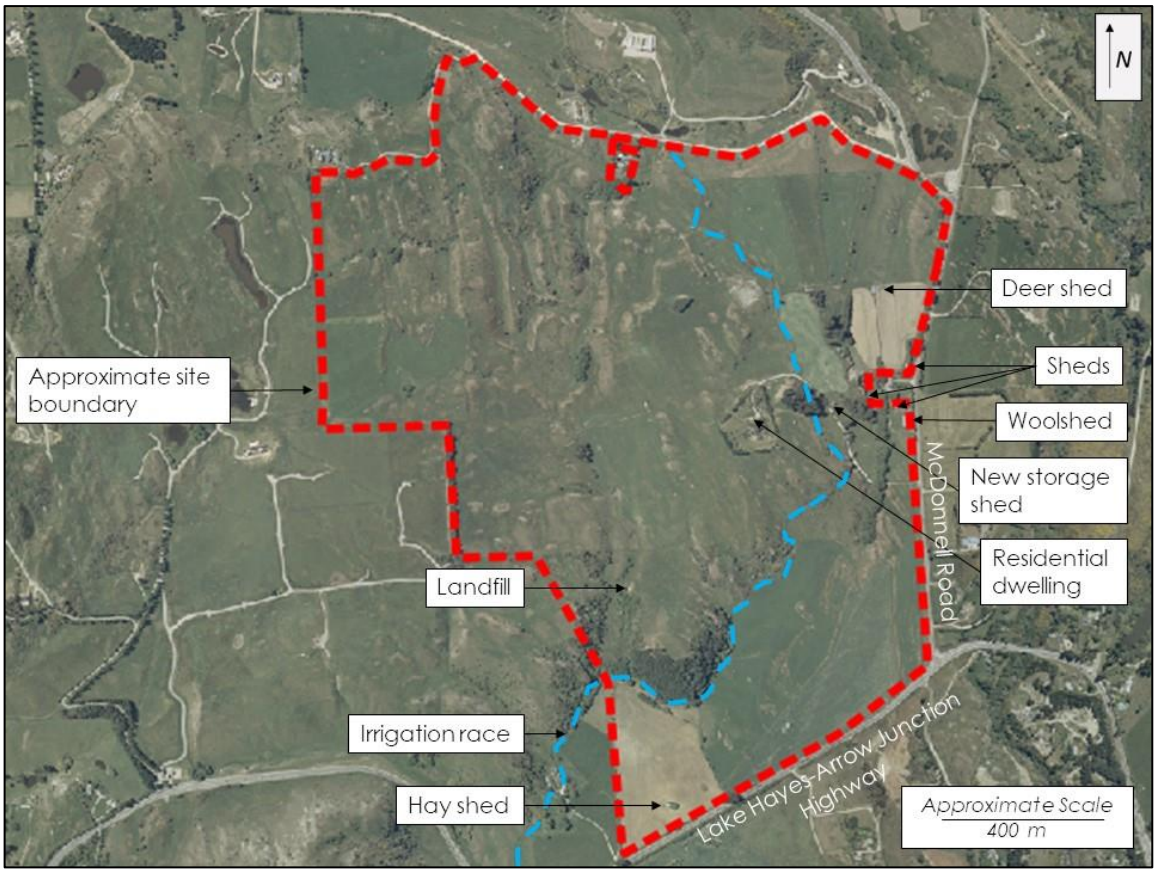

Figure 2: Site Layout Plan

Source: Land Information New Zealand, 2017

Plate 1: Looking east over the site

Plate 2: Looking west over the site

Plate 3: Landfill/offal pit

Plate 4: Irrigation race

Plate 5: Newly built storage shed

Plate 6: Woolshed and associated yards

Plate 7: Sheep dip

Plate 8: Standalone smaller deer shed and holding pens

2.5 Geology and Hydrology

Based on the 1:250,000 Geological Map of New Zealand, the subject site consists of two different types of geology and include:

- unweathered to slightly weathered, loose, poorly sorted, bouldery gravel, sand and silt (till) often with contorted bedding; and
- very well segregated and laminated; abundant pelitic and subordinate psammitic greyschist; minor greenschist and metachert (Turnbull, I.M, 2000).

The site investigation did not include a groundwater assessment. Otago Regional Council holds records for 16 wells located within 1 km of the subject site. Bore uses are for domestic, scheme and stock water. A map of these bores is provided in Appendix DAppendix E.

An irrigation race flows through the property.

2.6 Contaminants Commonly Associated with Landuse

Historical and current agricultural activities that could impact the soil quality of the site include:

- broadacre applications of agrichemicals including superphosphate and organochlorine pesticides such as dieldrin and DDT;
- Persistent pesticides and heavy metals used in sheep footbaths, sheep dips and dusting yards;
- Storage of agrichemicals in farm sheds; and
- Farm landfills.

2.6.1 Broadacre Application of Agrichemicals

Agricultural activities that may have occurred on the site include the broadacre application of agrichemicals. Persistent pesticides such as DDT have historically been applied to agricultural land to control pests on crops and in soils such as grass grub and superphosphate is applied to condition soil for grass growth. e3Scientific has assessed Organochlorine Pesticides (OCPs) and cadmium concentrations in soils throughout Otago and Southland. In all investigations, OCPs and cadmium have only been encountered at elevated levels

approaching NESCS soil contaminant standards in the vicinity of sheep dips, sheep footbaths, dusting yards and areas of historic agrichemical storage. In our view, it is highly unlikely the broadacre application of OCPs and cadmium have occurred at a rate and intensity that would result in the accumulations of persistent OCPs and cadmium in soils at levels that would present a risk to human health including under the NES rural residential landuse scenario.

2.6.2 Footbaths, Sheep Dips, Dusting Yards and Storage Areas

Arsenical pesticides and organochlorine pesticides such as dieldrin and DDT are persistent in soils and were commonly used to treat sheep in foot baths, sheep dips and in sheep yards. The location of this farming infrastructure is located near the farm hub adjacent to McDonnell Road.

e3scientific understands the farming infrastructure will continue to be used to support future farming operations. Furthermore, the farm hub is physically removed from the proposed golf course and residential activity by approximately 200 metres.

2.6.3 Farm Landfills

An existing farm landfill is located to the south of the site (see Figure 2) and removed from both the proposed golf course and residential areas. There will be no disturbance of the farm landfill and no access to the landfill by golfers or residences.

2.7 Conceptual Site Model

Figure 3 presents a development plan showing the location of the proposed golf course and residential clusters and the identified HAIL activities on the farm.

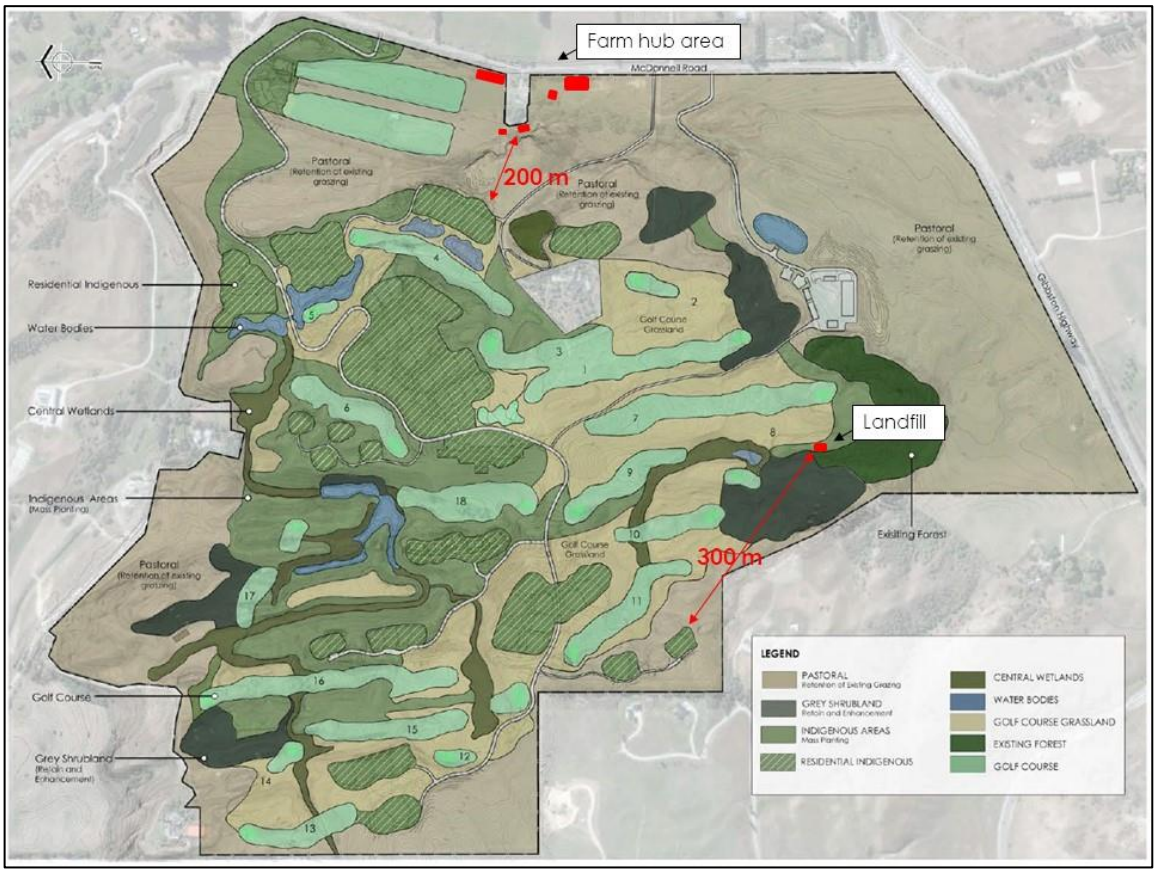

Figure 3: Identified HAIL sites and residential areas

Table 1 sets out a preliminary conceptual site model for the site based on the proposed development plans and the findings of the landuse history of the site. As discussed the broadacre application of pesticides and fertilisers are highly unlikely to have impacted soils above risk based soil contaminant standards. Furthermore, this activity is generally not considered a HAIL activity by territorial or regional authorities.

The farm hub activities and farm landfill may have impacted soil quality however it is highly unlikely these areas will be accessed by people golfing or living on the site. A credible exposure pathway to these areas of the site is not open and impacted soil (if present) is not a risk associated with the proposed development.

Table 1 Preliminary Conceptual Site Model

Source	Receptors	Exposure Pathway	Risk
Broadacre application of fertilisers and pesticides	Adults and children living on the site	Ingestion of soils, inhalation of dust and dermal exposure during gardening, children playing in gardens, ingesting vegetables grown in soils	Highly unlikely contaminant concentrations above risk based soil contaminant standards
Farm hub	Adults and children living on the site and, construction workers	Highly unlikely people living on the site would be exposed to soils around the farm hub	Highly unlikely
Farm Landfill	Adults and children living on the site	Highly unlikely people living on the site would be exposed to soils around the farm hub	Highly unlikely

2.8 Other Matters

e3Scientific has completed detailed investigations in Frankton and the Gibbston Valley that have found naturally occurring elevated arsenic levels above the residential soil contaminant standards set out in the NESCS. Given these findings, an assessment of arsenic concentrations in surface across the site was undertaken. This investigation is set out in the following sections of this report.

3 Soil Sampling Strategy, Methodology and Results

3.1 Data Quality Objectives

The data quality objectives (DQOs) of the investigation were to:

- Characterise the presence and concentration of arsenic associated with natural elevated background concentrations; and,
- Determine the risk of any soil contamination encountered on the site to human health, based on a residential landuse scenario.

3.2 XRF Sampling Rationale

A portable handheld X-Ray Fluorescence analyser (XRF) was used to assess in-situ surface soils (0-0.1) across the site to provide a screening assessment of arsenic concentrations across the site. The use of a handheld XRF allows for real-time concentrations to be collected and provides the ability to collect more analytical information on a site to provide better confidence in the concentrations of heavy metals. Readings were collected from eighty-seven locations across all residential development clusters. At each location multiple readings were collected. The XRF reading locations are presented in Figure 4.

Figure 4: XRF reading locations

Source: Land Information New Zealand, 2017

3.3 XRF Reading Methodology

XRF analysis was undertaken using an Olympus C Series Vanta™ portable handheld x-ray fluorescence analyser. XRF assessment of soils were undertaken in-situ to provide a screening level analysis, by placing the XRF directly in contact with the soil.

XRF assessment of soils were undertaken in-situ, by placing the XRF directly in contact with the ground. The following procedures were adopted by the field operator during the soil assessment process:

- Instrument checks were undertaken, according to the e3Scientific XRF standard operating procedure. These include; checking the functionality of the XRF against standard reference media, analysis time, and the integrity and cleanliness of the XRF sampling window.
- Surface sample sites were prepared for analysis as follows:
    - Debris were removed, including coarse gravels and large organic matter such as twigs and leaves. In grassed areas, the top layer of

soil was removed so that both the grass and root zone of the grass was removed.
    - Sites were prepared with the use of a clean spade, the top 5 to 10 cm of soil was loosened.
- Information was recorded for each measurement, including sample location and reading number. Observations of the soil were noted, including: presence of organic matter, soil moisture, texture and other relevant observations.

3.4 XRF Soil Reading Result Review

A review of arsenic XRF data was completed which included reviewing the average arsenic concentration across the site and the range of readings while comparing concentrations against the NESCS residential soil contaminant standard of 20 mg/kg. At XRF reading locations where multiple readings were collected the highest concentrations were selected for averaging. Readings for each location are presented in Appendix E and average concentration in Table 2. The following is a summary of results:

- Arsenic concentrations across the residential lots ranged from 2 to 20 parts per million (ppm) and do not exceed the adopted residential contaminant standard of 20 mg/kg.
- The average arsenic concentration for the proposed residential lots is 9.82 ppm which is less than half of the residential contaminant standard.

Table 2: XRF Arsenic Results (ppm)

Contaminant	Average Concentration	Range of Readings	Guideline
Arsenic	9.82	2-20	20[1]

[1] Ministry for the Environment Users Guide 2012 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health Appendix B: Soil contaminant standards (residential).

4 Summary and Conclusions

The PSI has identified a number of current and historic activities that have occurred on the HGFL farm that are listed on the HAIL including the former sheep yards, footbath located adjacent to McDonnell Road and the farm landfill. All of these activities can result in an impact to soil quality and can present a risk to human health should people be exposed to the soils. The proposed golf course and residential development areas will not disturb soils in the vicinity of this farming infrastructure and it is highly unlikely golfers or future residents will interact with these areas of the farm.

The PSI has identified that the broadacre application of fertilisers and pesticides may have occurred, however territorial and regional authorities generally do not consider this to be a HAIL activity. Notwithstanding this point, e3scientific can confirm that broadacre applications can result in trace levels of contaminants in soils, however it is highly unlikely concentrations are present that would present a risk to human health under a residential landuse scenario.

The PSI has also assessed background arsenic levels in sols across the areas of proposed residential clusters. The XRF soil survey found arsenic levels to be relatively consistent, representative of background concentrations and below the NESCS residential soil contaminant standard.

Based on the findings of the PSI, e3scientific concludes that it is highly unlikely there is a risk to human health associated with the proposed golfing and residential activities and the landuse change is considered permitted under regulation 8(4) of the NESCS. Furthermore, the HAIL land identified on the HGFL farm will not be disturbed by earthworks required for development activities. e3scientific therefore considers earthworks are not subject to the provisions of the NESCS.

5 References

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2313

Appendices

Amended version received 26/02/2018

Appendix A:

e3Scientific Limited Contaminated Land Experience

2313

Contaminated Land Services

e3Scientific is a New Zealand owned and operated environmental science consultancy. Our team deliver technical, innovative science; practical solutions; and expert advice to assist our clients in the smart management of the environment.

e3Scientific provides a range contaminated land services, including:

- Due Diligence Investigations.
- Preliminary Site Investigations.
- Detailed Site Investigations.
- Soil and groundwater remedial advice and management.

Our Contaminated Land Team has a sound understanding of New Zealand's regulatory environment with respect to the assessment and management of contaminated land and has been a major supplier of contaminated land services in Otago and Southland since the contaminated land National Environmental Standard (NES) took effect in January 2012.

Glenn Davis is the Technical Director of the e3Scientific Contaminated Land team and has over 20 years post graduate experience working as an Environmental Scientist. Glenn has completed preliminary site investigations, soil and groundwater investigations, detailed site investigations, and remediation projects for the oil and gas industry, transport, agricultural and land development industries and local and national governments in New Zealand, Australia, Asia, the United Kingdom and Ireland. Glenn is responsible for technical oversite of projects and sign off of contaminated land investigations and is supported by Fiona Rowley and Carrie Pritchard (Senior Environmental Scientists, specialising in Contaminated Land Investigation and Remedial Work), Alexandra Badenhop (Principal Hydrogeologist) and Project Environmental Scientists, Duncan Keenan and Dr Tapuwa Marapara.

e3scientific has completed multiple PSIs, DSIs and remedial projects across New Zealand and regularly provides peer review of site investigations for district and regional councils. Projects have involved investigations into the impact on soil quality associated with operational and historic timber treatment plants, fuel storage and distribution facilities, substations, sheep dips and yards, orchards, vineyards, agricultural activities, gasworks, service stations and operational and closed landfills.

Amended version received 26/02/2018

2313

The following provides a summary of key contaminated land work e3scientic is involved in or has completed:

- Hundreds of Preliminary Site Investigations and Detailed Site Investigations to support subdivision, landuse change and earthworks consent applications.
- Support Environment Southland's Selected Landuse Register including the identification of Hazardous Activities on properties across Southland and the registration of HAIL sites.
- Review of groundwater contamination associated with the former Invercargill gasworks site including the completion of a groundwater investigations and an environmental risk assessment to support a discharge consent application.
- Large scale remedial works of former timber treatment plants and sheep dips including the completion of detailed investigations to delineate the extent of contaminated soils, design of remedial action plans, project management of remedial works and completion of site validation and council close out reports.
- Investigations into an area of arsenic impacted soils in Frankton including the completion of detailed investigations to delineate the horizontal extent, consideration of the source of the arsenic, liaison with property owners and council.
- Project management of a bioavailability study of arsenic impacted soils in Gibbston Valley to support a Tier 2 risk assessment associated with a residential development.
- Oversight of the removal of multiple underground fuel storage systems for private residences, schools and oil and gas clients.

The e3Scientific team is committed to professional development, and employing new technologies in the prevention, assessment and remediation of contaminated land. e3Scientific is an active member of the Australasian Land & Groundwater Association and WasteMINZ.

Amended version received 26/02/2018

Appendix B:

Historic Certificates of Title

Amended version received 26/02/2018

2313

QuickMap Title Details

Information last updated as at 13 Nov 2017

COMPUTER FREEHOLD REGISTER
DERIVED FROM LAND INFORMATION NEW ZEALAND

Cancelled

Identifier	**138690**
Land Registration District	**Otago**
Date Issued	27 May 2004

Prior References

OT10D/415 OT17D/660

Type	Fee Simple
Area	40.5770 hectares more or less
Legal Description	Lot 1 Deposited Plan 333857 and Lot 6 Deposited Plan 18290 and Lot 8 Deposited Plan 18291

Proprietors

Subject to a right to convey water over part Lot 1 marked a-b-c-d on DP 333857 and over part Lot 8 marked A on diagram attached to Transfer 790485.2 created by Transfer 790485.2 - 17.10.1991 at 9:35 am

Subject to a right (in gross) to convey water over part Lot 6 marked marked ET and over part Lot 8 Marked EU on diagram attached to Transfer 831796 in favour of Arrow Irrigation Company Limited created by Transfer 6021261.3 - 27.5.2004 at 9:00 am

Subject to Section 241(2) Resource Management Act 1991 (affects DP 333857)

The easements created by Easement Instrument 6021261.4 are subject to Section 243 (a) Resource Management Act 1991

Appurtenant hereto is a right to convey electricity and water and take and pump water created by Easement Instrument 6021261.4 - 27.5.2004 at 9:00 am

Subject to a right to convey electricity over part marked D and E on DP 333857 created by Easement Instrument 6021261.4 - 27.5.2004 at 9:00 am

Land Covenant in Easement Instrument 6021261.5 - 27.5.2004 at 9:00 am

6176495.1 Variation of the conditions of the easement created by Easement Instrument 6021261.4 - 8.10.2004 at 9:00 am

Land Covenant in Easement Instrument 6626529.3 - 28.10.2005 at 9:00 am

6706161.1 CTs issued - 23.12.2005 at 9:00 am \

Legal Description	**Title**
Lot 1-2 Deposited Plan 356270	229446
Lot 3-4 Deposited Plan 356270	229447

\ \CANCELLED

Historic Owners

ROGER NORMAN **MACASSEY** GRAEME JAMES **MARSH**

Issued Titles

Amended version received 26/02/2018

2313

229446 (Live) Lot 1-2 Deposited Plan 356270
229447 (Live) Lot 3 Deposited Plan 18290 and Lot 3-4 Deposited Plan 356270

2313

QuickMap Title Details

Information last updated as at 13 Nov 2017

COMPUTER FREEHOLD REGISTER
DERIVED FROM LAND INFORMATION NEW ZEALAND

Identifier	**229447**
Land Registration District	**Otago**
Date Issued	23 December 2005

Prior References

138690 OT10D/418

Type	Fee Simple
Area	40.8205 hectares more or less
Legal Description	Lot 3 Deposited Plan 18290 and Lot 3-4 Deposited Plan 356270

Proprietors

Hogans Gully Farming Limited

Subject to a right (in gross) to convey water over part marked h1-i-j and i- k on DP 356270 in favour of Arrow Irrigation Company Limited created by Transfer 831796 - 14.6.1993 at 10:46 am

Appurtenant to part formerly contained in CT 138690 hereto is a right to convey electricity and water and take and pump water created by Easement Instrument 6021261.4 - 27.5.2004 at 9:00 am

The easements created by Easement Instrument 6021261.4 are subject to Section 243 (a) Resource Management Act 1991

Land Covenant in Easement Instrument 6021261.5 - 27.5.2004 at 9:00 am

6176495.1 Variation of the conditions of the easement created by Easement Instrument 6021261.4 - 8.10.2004 at 9:00 am

Land Covenant in Easement Instrument 6626529.3 - 28.10.2005 at 9:00 am

Subject to Section 241(2) Resource Management Act 1991 (affects DP 356270)

Fencing Covenant in Transfer 7157449.1 - 12.12.2006 at 9:00 am

Land Covenant in Easement Instrument 7157449.3 - 12.12.2006 at 9:00 am

Land Covenant in Easement Instrument 7157449.4 - 12.12.2006 at 9:00 am

Land Covenant in Easement Instrument 10607554.1 - 8.6.2017 at 5:11 pm

Amended version received 26/02/2018

2313

QuickMap Title Details

Information last updated as at 13 Nov 2017

COMPUTER FREEHOLD REGISTER
DERIVED FROM LAND INFORMATION NEW ZEALAND

Identifier	**573582**
Land Registration District	**Otago**
Date Issued	15 December 2011

Prior References

OT281/55

Type	Fee Simple
Area	39.6605 hectares more or less
Legal Description	Section 2 Survey Office Plan 440817

Proprietors

Hogans Gully Farming Limited

Subject to a right (in gross) to convey water over part marked A on SO 440817 and shown as EW and EX1 in the withinTransfer in favour of Arrow Irrigation Company Limited created by Transfer 831796 - 14.6.1993 at 10:46 am

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

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 7157449.1 - 12.12.2006 at 9:00 am

Land Covenant in Easement Instrument 7157449.3 - 12.12.2006 at 9:00 am

Land Covenant in Easement Instrument 7157449.4 - 12.12.2006 at 9:00 am

Land Covenant in Easement Instrument 10607554.1 - 8.6.2017 at 5:11 pm

Amended version received 26/02/2018

2313

SEC 79 | 3 DP18290 | SEC SEC 35 | LOT 6 DP18290 | BLK VII | PT SEC 27 | 7 DP18290

BLK BDY

SEC 40

BLK IX

PT SEC 4

PT SEC 2

SEC 3

SEC 60

SEC 2A

113·31 | 120·10 | 140·66 | 89° 53′ 50″ (867·54) | 493·47 | 89° 53′ 50″ 164·00

Pt Sec 1

8
17·906 ha
C.T. 77/110

Pt Sec 1

9
2·3648 ha

Unformed Legal Road

155° 28′ 40″ 8·82 | 20·12 | 155° 55′ 40″ 205·08 | 206·25 155° 55′ 40″ (208·01)

196·51 (315·38) 359° 52′ 40″

179° 51′ 10″ (284·77)

495·81 | 89° 53′ 55″ (954·71) | 458·87 | 89° 53′ 55″ 73·20

118·87

Pt Sec 67

10
11·933 ha
C.T. 79/176

198·46 | 89° 54′ (1053·58) | 379·39 | 855·12 Bdy | 457·73

319° 26·08 | 319° 152·97 | 114·13 | 87·50 | 25″ | 25″

Legal MCDONNELL ROAD 20·12

11
3202m²

717 400 N

BLK BDY

BLK VIII

12
39·806 ha

PT SEC 4

156° 11′ 30″ 168·59

148° 47′ 20″ 138·79

179° 51′ 10″ 57·35

178° 43′ 30″ 148·72

179° 38′ 90·10

717 000 N

359° 51′ 45″ 437·23

C.T. 281/55

21·08 | 24° 53′ 40″

51° 19′ 00″ 165·36

451·26

(649·99) 11°

63° 198·73

STATE HIGHWAY No. 6 Legal 20·12

334 600 E | 335 000 E | 335 400 E | 710 000 N

Approvals.

REGISTERED OWNER

DATUM : Geodetic 1949
ORIGIN : Mt. Nicholas
Coords in terms of false origin
700 000 N 300 000 E

Total Area 72·33 ha

Comprised in C.T. 281/55, 77/110
PT C.T. 79/176

I, WILLIAM ROBERT LUCY of QUEENSTOWN

Registered Surveyor and holder of an annual practising certificate hereby certify that this plan has been made from Surveys executed by me or under my direction; that both plan and Survey are correct and have been made in accordance with the regulations under the Surveyors Act 1966

Dated at Queenstown *this* 20th *day of* September *19* 82 *Signature*

Field Book 2221 *p.* 96-108 *Traverse Book* 221 *p.* 183-187

Reference Plans DP 18067, 15648, S.O. 18374, 19034, 13544, 11327, 18870, 13545, 6612, 6670, 6419, 6437, 6523, 6392, 6642, 6502, 1503

Examined [signature] *Correct* [signature]

Approved as to Survey

5/3/84

Surveyor

Deposited this 8th day of March 1984

District Land Registrar

File

Received 26-10-82

Instructions

D.P. 18291

LAND DISTRICT OTAGO
SURVEY BLK.& DIST. VIII SHOTOVER
NZMS 261 SHEET No. F 41

Lots 8–12 being Redefinition of Secs 1, 3, 60, 67 and Pt Sec 4

LOCAL AUTHORITY LAKE COUNTY
Surveyed by N & ES Paterson Ltd
Scale 1 : 3000 Date JUNE 1982

SDR

Surveyor-General, Department of Lands and Survey, Wellington

SS FORM N 93

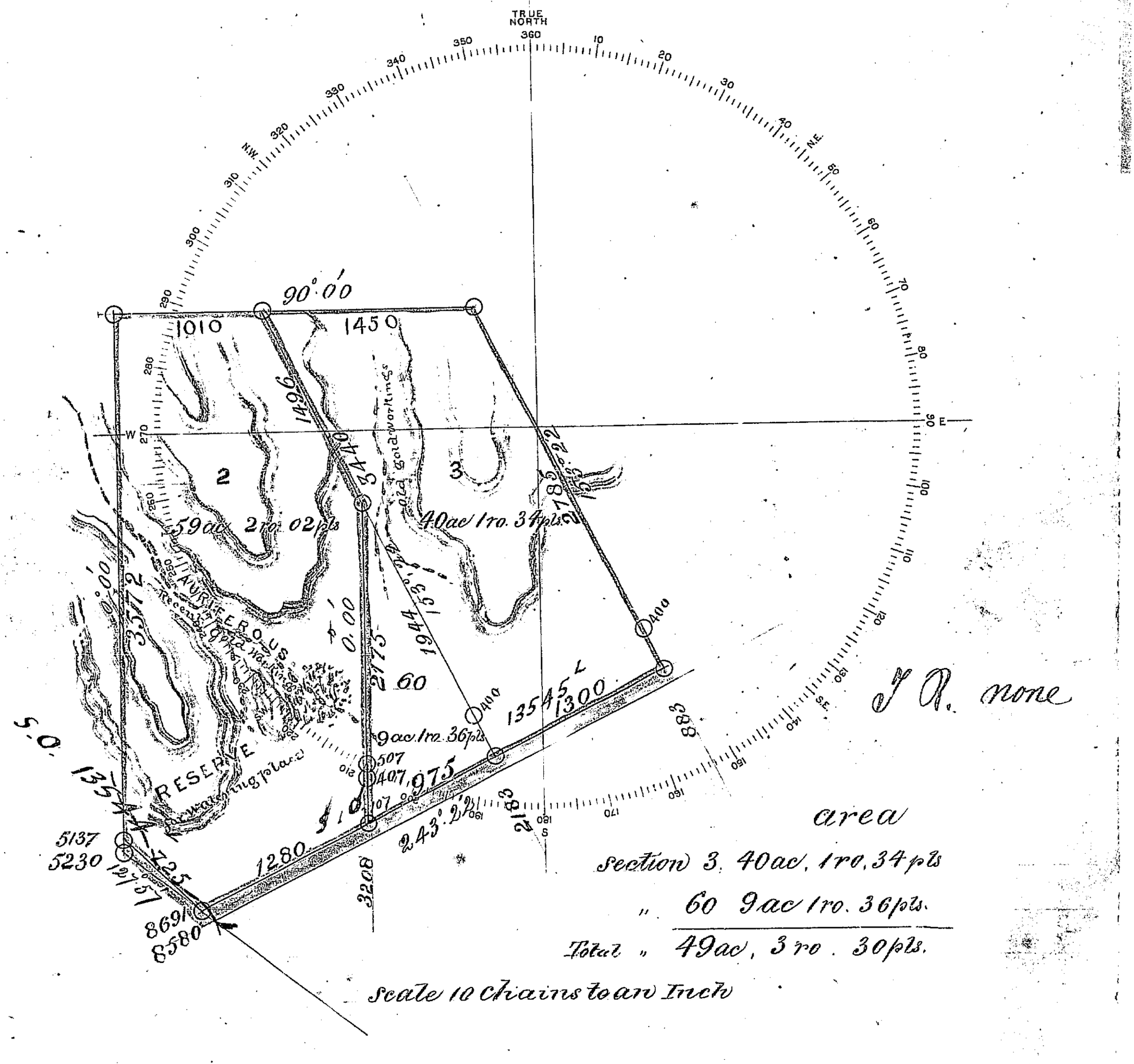
Amended version received 26/02/2018

2313

Date when received from Surveyor.

Survey Department of Otago.

Plan of land applied for by
John Cameron, as an "agricultural area"
also
Plan of land reserved as a Watering place for Cattle



area
Section 3. 40ac. 1ro. 34pls
" 60 9ac 1ro. 36pls.
Total " 49ac, 3ro. 30pls.

Scale 10 Chains to an Inch

Field Sketch of Sections 3, 60, & 2 Block 8 SHOTOVER District,

Surveyed by P Mitchell Assistant Surveyor

Date 21 December 1867

Received 26/2/68
D. H. 4. 58

NOTE.— All unmeasured and calculated lines to be dotted only. Objections to granting this lease are to be noted on the back hereof and any other remarks the Surveyor may deem it necessary to make.

6392

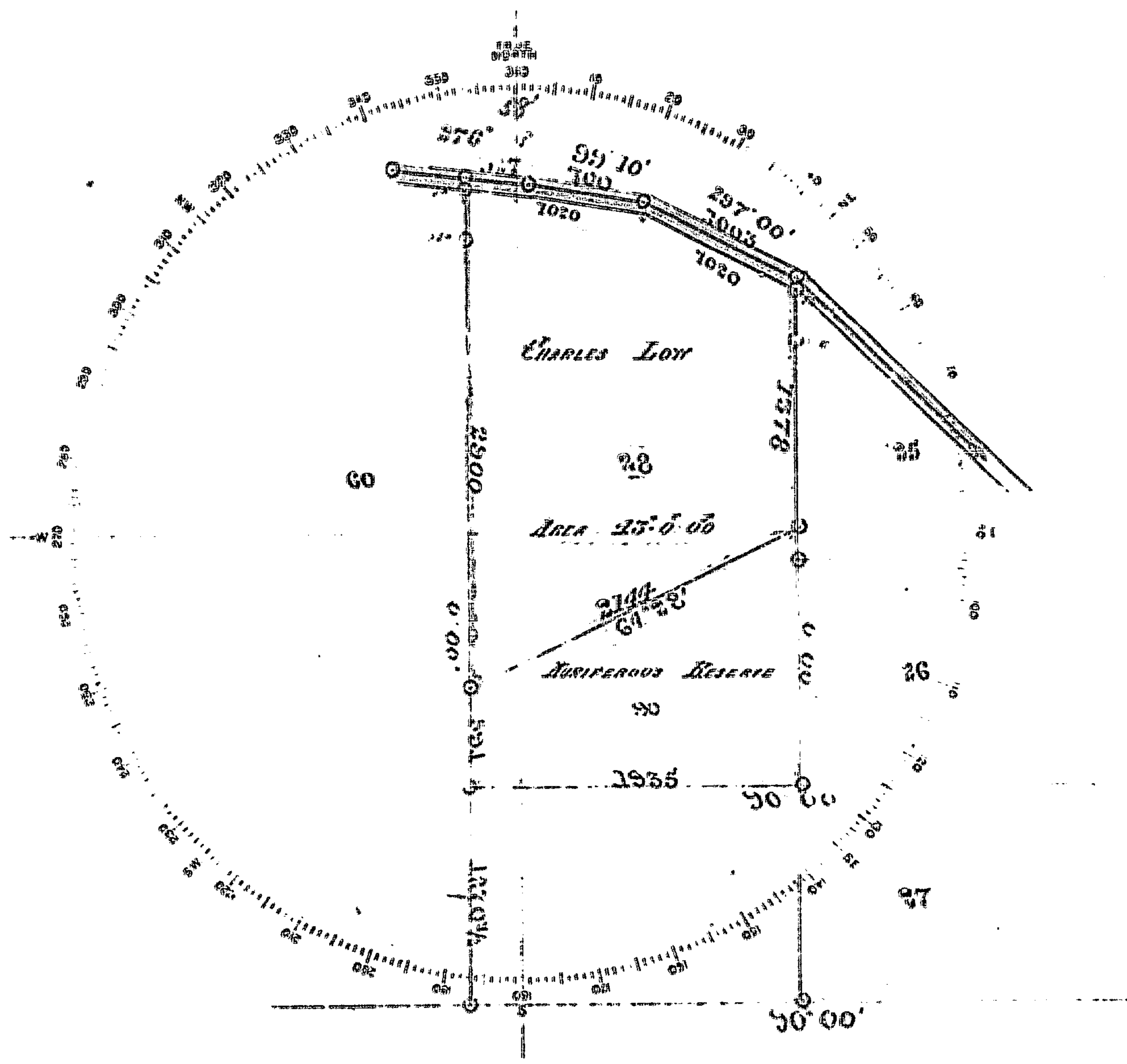
Amended version received 26/02/2018

[redacted]

Survey Department of Otago.

Date when received from Surveyor 17.11.71

Survey omitted no charge. Sect. consequently not debited with survey fees. JS.



J.A. none

Recorded on all Maps
22/11/71 AHP

Field Sketch of Section 28 Block VII [illegible] District.

Surveyed by John Spence [illegible]

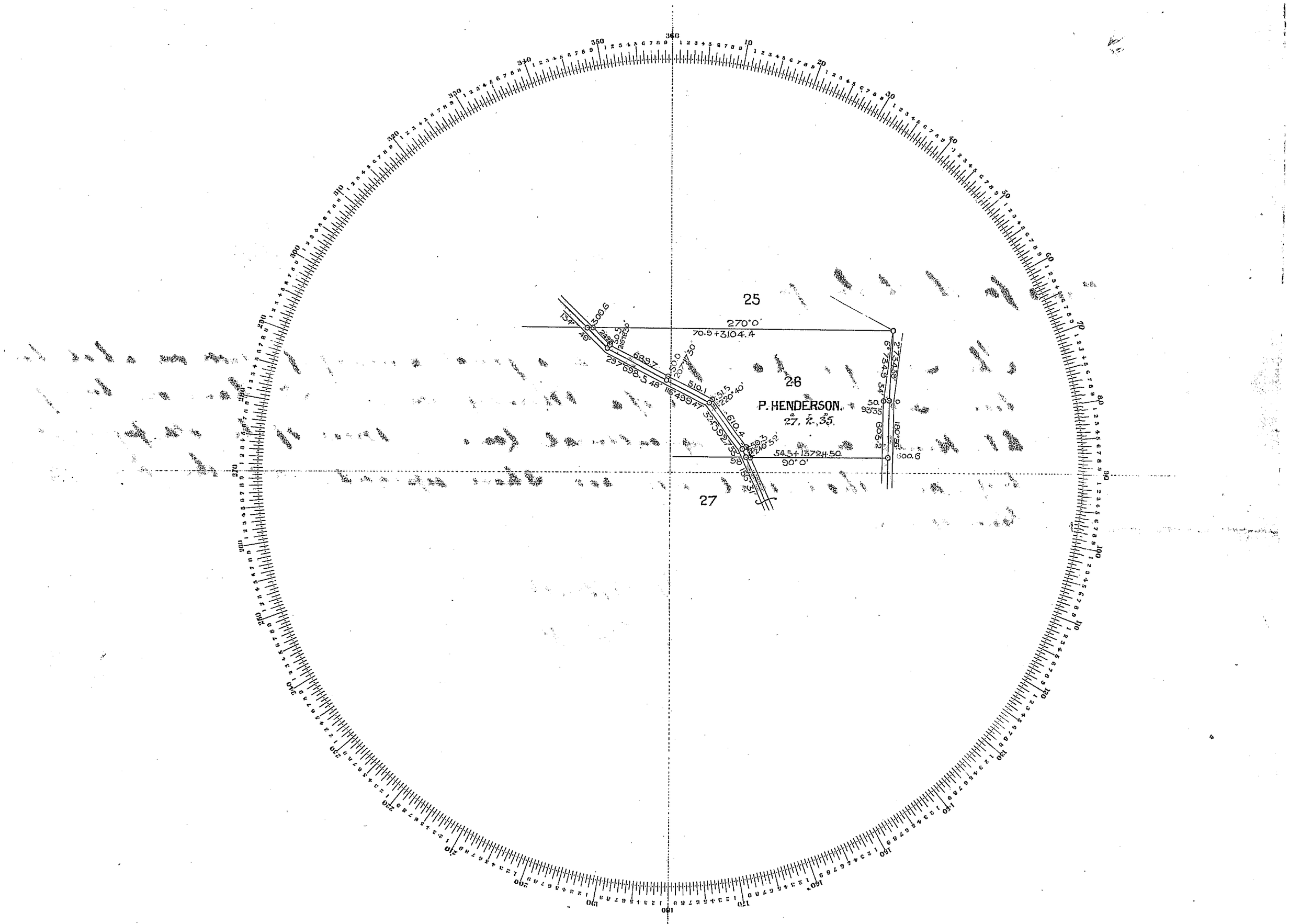
Date 4/10/70 18

6523

2313

General Survey Department of New Zealand

Provincial District of .....



Plan and Notes of Ground Sketch of Section 26 Block VII Shotover District

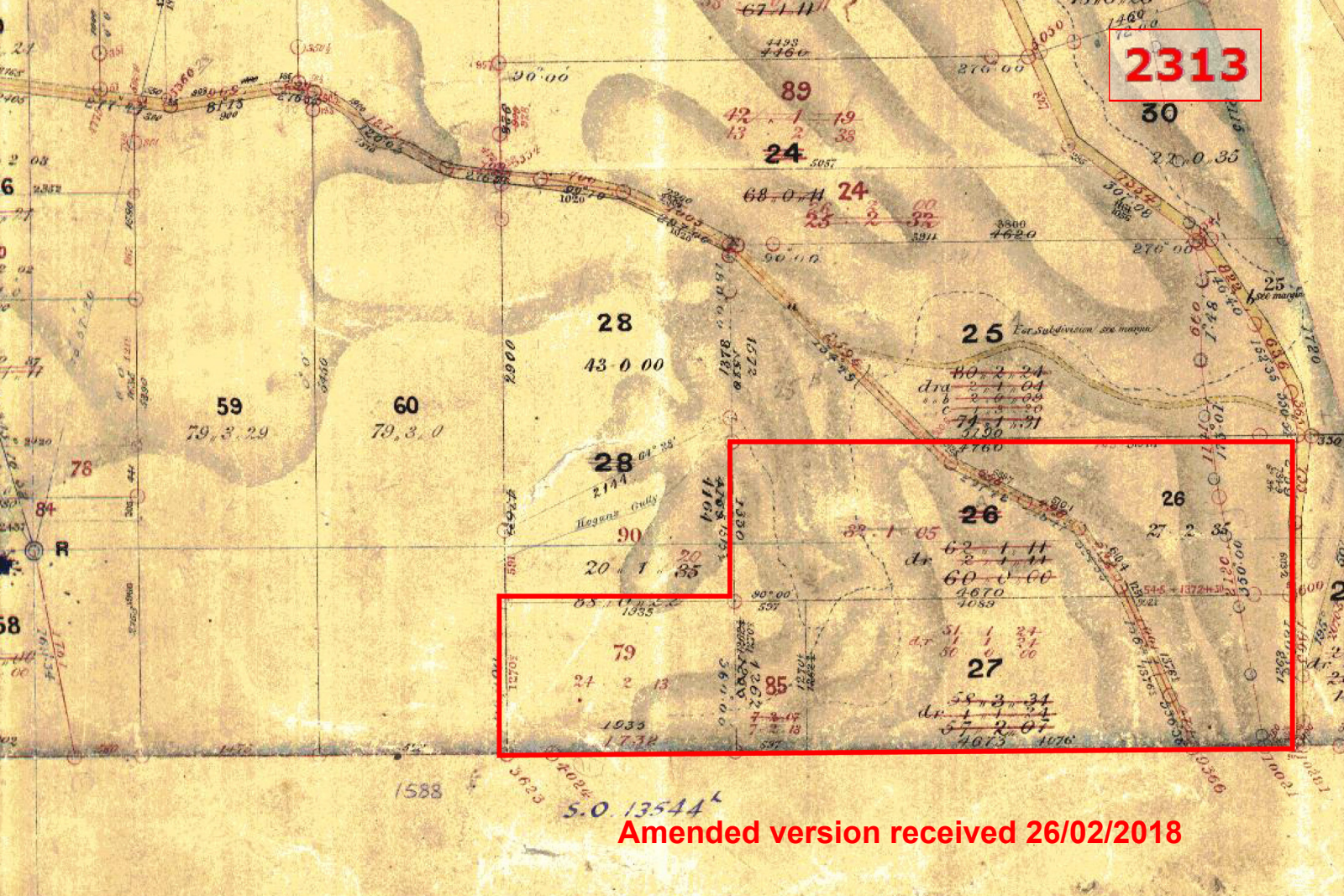
Surveyed by Garrison & Manager

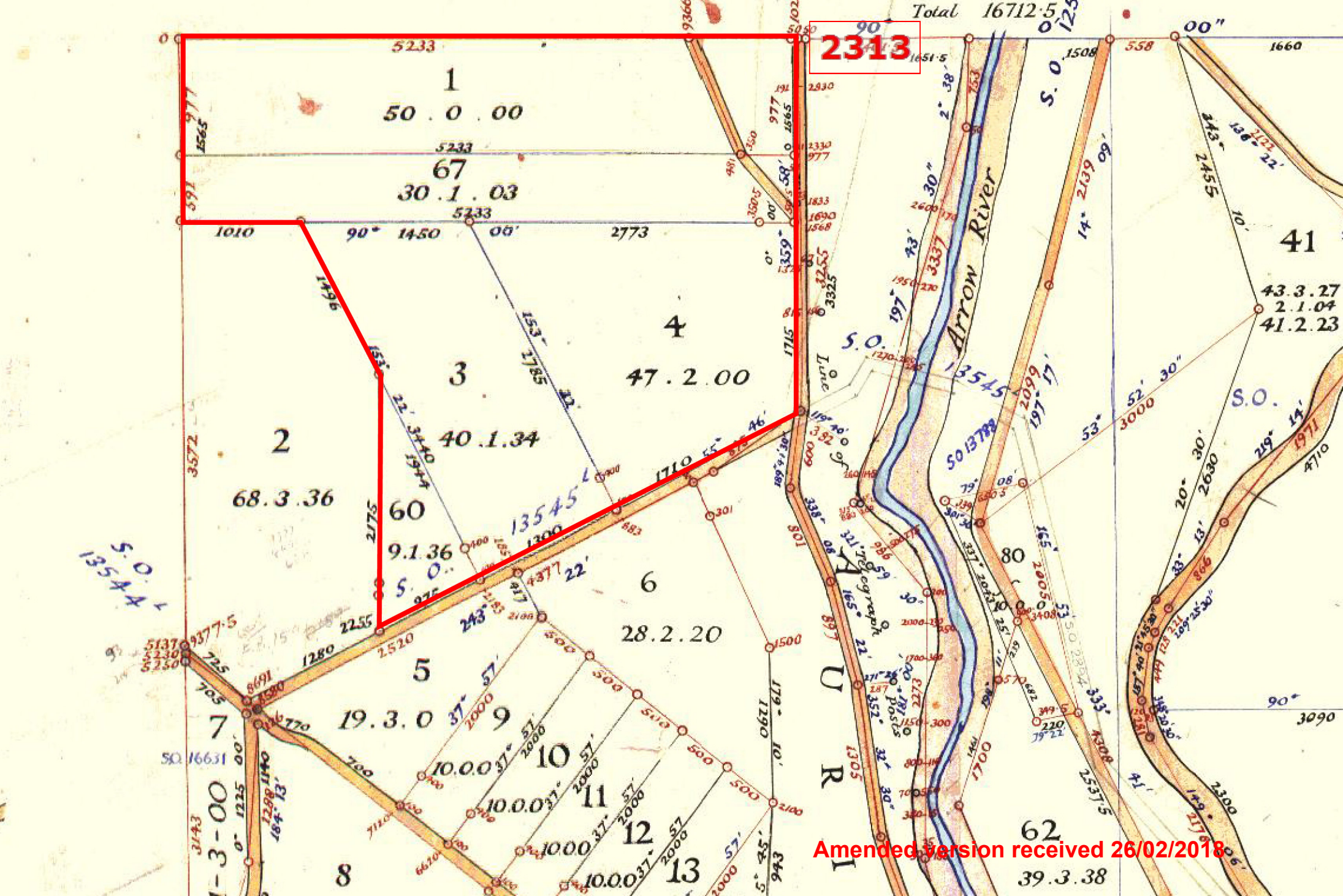
Date April 30th 1878

Scale 10 Chains to an Inch

Examined 10-7-78

MINING
6612

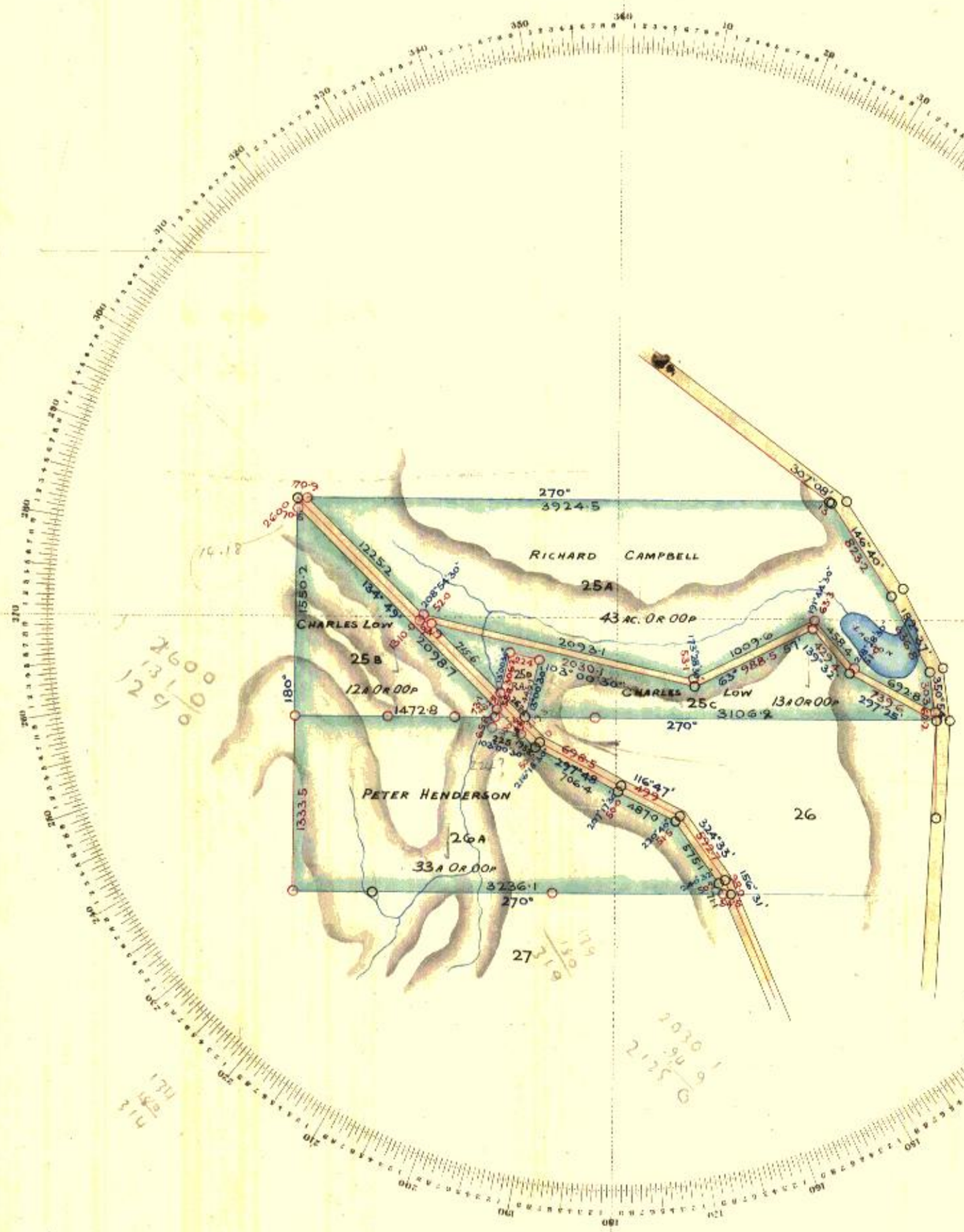

2313
Amended version received 26/02/2018


2313
Total 16712·5
1
50 . 0 . 00
67
30 . 1 . 03
2
68 . 3 . 36
3
4
47 . 2 . 00
40 . 1 . 34
5
19 . 3 . 0
6
28 . 2 . 20
7
8
9
10
11
12
13
60
9 . 1 . 36
80
62
39 . 3 . 38
41
43 . 3 . 27
2 . 1 . 04
41 . 2 . 23
Arrow River
Amended version received 26/02/2018

2313

General Survey Department of New Zealand

Provincial District of Otago 3668



Notes:-

Section 25D
Reo. Area
Peter Henderson
Area 1.1.02
D.P. 1.02
1.0.00

Field Sketch of Section S 25A, 25B, 25C, 25D & 26A *Block* VII Shotover I. *District,*

Surveyed by W. H. Wilmot Assist Surveyor

Date October 15th 1883

Scale 10 *Chains to an Inch*

SURVEY OFFICE
DUNEDIN
17 NOV 1883

NOTE Measured lines to be drawn in red, calculated or scaled lines in black, observed bearings in blue the figures also being in red black and blue respectively. Draw a red circle round each peg, a double red circle round each trig station. Remarks of Surveyor to be noted on back hereof.

Otago Survey Litho-graphic Press

Amended version received 26/02/2018

CANCELLED

2313 Land and Deeds 69

No. 8D/149

References
Prior C/T 75/21, 8A/667

Transfer No.
N/C. Order No. 554835/4

REGISTER

CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT

This Certificate dated the 26th day of May one thousand nine hundred and eightyone under the seal of the District Land Registrar of the Land Registration District of O T A G O

WITNESSETH that STACEY ANDREW RADFORD of Hawarden Farmer

is seised of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by memorial underwritten or endorsed hereon) in the land hereinafter described, delineated with bold black lines on the plan hereon, be the several admeasurements a little more or less, that is to say: All that parcel of land containing 11.7403 hectares more or less being Sections 26 and 97 Block VII SHOTOVER DISTRICT

DISCHARGED

X 14821 Irrigation Agreement under part XI Public Works Act 1928 affecting Section 26 - 13.11.1952 at 11.02 am

A.L.R.

554835/6 Transfer to Walter Reid Jackson of Dunedin Chartered Accountant - 26.5.1981 at 10.54 am

A.L.R.

DISCHARGED 17 MAR 1983 L.L.R.

554835/7 Mortgage to Cook Allan & Co. Nominees Limited - 26.5.1981 at 10.54am

A.L.R.

ASSISTANT LAND REGISTRAR

DISTRICT LAND REGISTRAR NEW ZEALAND

DISCHARGED 21 NOV 1984

590531 Certificate under Section 221 of the Public Works Act 1981 - 22.2.1983 at 2.20 pm

A.L.R.

DISCHARGE [illegible]

591839/3 Mortgage to Cook Allan & Co Nominees Limited - 17.3.1983 at 1.59 pm

A.L.R.

A.L.R.

630700 Variation of Mortgage 591839/3 - 27.2.1985 at 10.34am

A.L.R.

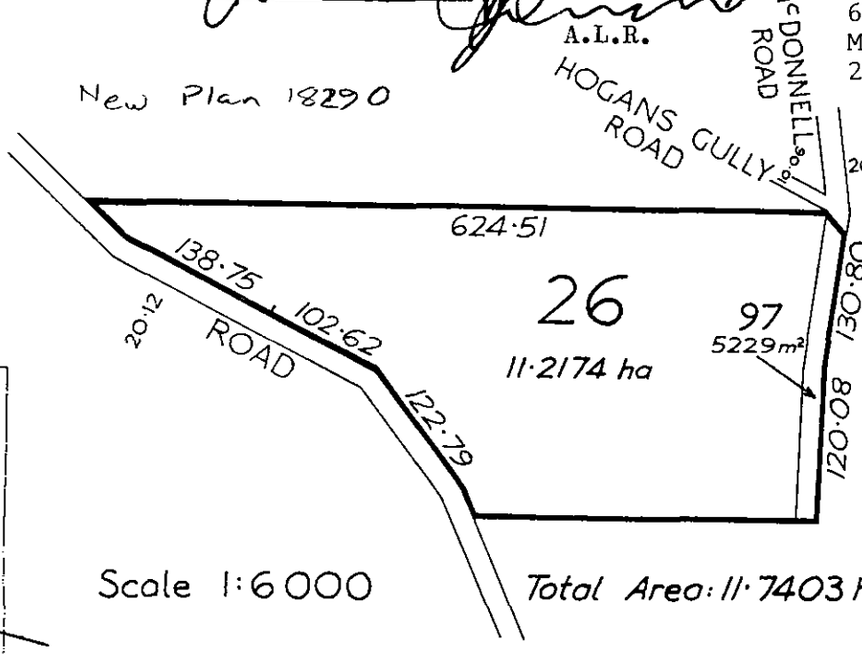
676512 Transfer to Francis Basil Jackson of Otautau, Company Director, Roger Norman Macassey of Dunedin, Solicitor and Graeme James Marsh of Dunedin, Company Director - 9.4.1987 at 2:32 p.m.

A.L.R.

704697 Variation of Mortgage 591839/3 - 15.6.1988 at 10.47am

A.L.R.

New Plan 18290



Scale 1:6000

Total Area: 11·7403 ha

SO 6612, 18870

Measurements are Metric

No. 8D/149

Amended version received 26/02/2018

CT 8D/149

831796 Transfer being a grant of a right (in gross) to convey water over part herein shown marked 'EQ' on diagram annexed thereto together with incidental rights in favour of Arrow Irrigation Company Limited - 14.6.1993 at 10.46am

A.L.R.

915349/1) Cancelled and new
3.9.1996) CT 17D/659 issued for Lot 5 DP 18290

A.L.R.

DUPLICATE DESTROYED

31/9/1996.

DISTRICT LAND REGISTRAR
CANCELLED
OTAGO
NEW ZEALAND

References
Prior C/T 77/109, 8A/668

Transfer No.
N/C. Order No. 554835/5

CANCELLED

2313
Land and Deeds 69

No. 8D/150

REGISTER

CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT

This Certificate dated the 26th day of May one thousand nine hundred and eightyone under the seal of the District Land Registrar of the Land Registration District of O T A G O

WITNESSETH that STACEY ANDREW RADFORD of Hawarden Farmer

is seised of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by memorial underwritten or endorsed hereon) in the land hereinafter described, delineated with bold black lines on the plan hereon, be the several admeasurements a little more or less, that is to say: All that parcel of land containing 20.5750 hectares more or less being Sections 27 and 98 Block VII SHOTOVER DISTRICT

X 1482 Irrigation Agreement under part XI Public Works Act 1928 affecting Section 27 - 13.11.1952 at 11.22 am

A.L.R.

554835/6 Transfer to Walter Reid Jackson of Dunedin Chartered Accountant - 26.5.1981 at 10.54 am

A.L.R.

554835/7 Mortgage to Cook Allan & Co. Nominees Limited - 26.5.1981 at 10.54 am

DISCHARGED 7 MAR 1983 A.L.R.

A.L.R.

ASSISTANT LAND REGISTRAR

DISTRICT LAND REGISTRAR NEW ZEALAND

590531 Certificate under Section 221 of the Public Works Act 1981 - 22.2.1983 at 2.20 pm

DISCHARGE OF MORTGAGE

A.L.R.

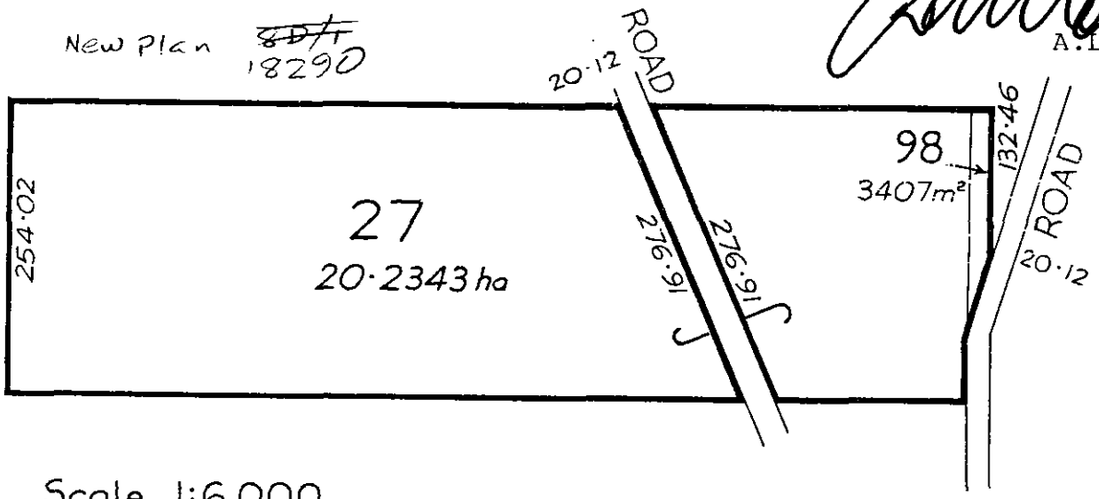
591839/3 Mortgage to Cook Allan & Co Nominees Limited - 17.3.1983 at 11.50 am

A.L.R.

630700 Variation of Mortgage 591839/3 - 27.2.1985 at 10.34am

A.L.R.

New Plan ~~SDP~~ 18290



Scale 1:6 000

Total Area : 20·5750 ha

SO 6419, 18870

Measurements are Metric

No. 8D/150

Amended version received 26/02/2018

Register copy for L. & D. 69, 71, 72

C.T. 8D/150

676512 Transfer to Francis Basil Jackson of Otautau, Company Director, Roger Norman Macassey of Dunedin, Solicitor and Graeme James Marsh of Dunedin, Company Director - 9.4.1987 at 2:32 p.m.

A.L.R.

704697 Variation of Mortgage 591839/3 - 15.6.1988 at 10.47am

A.L.R.

~~790485/2 Transfer granting a right to convey water over Part Lot 7 DP 18290 herein marked C on the diagram attached hereto appurtenant to Lots 2 and 3 DP 15648 (CT 6B/718 and 719) - 17.10.1991 at 9.35am~~

Error

A.L.R.

790485/2 Transfer granting a right to convey water over part herein marked "C" on the diagram annexed thereto appurtenant to part Lot 2 and Lot 3 DP 15648 (Cs.T. 6B/718 and 6B/719) - 17.10.1991 at 9.35am

A.L.R.

831796 Transfer being a grant of a right (in gross) to convey water over part herein shown marked 'ET' on diagram annexed thereto together with incidental rights in favour of Arrow Irrigation Company Limited - 14.6.1993 at 10.46am

A.L.R.

915349/2) Cancelled and new CT
3.9.1996) 17D/660 issued for Lots 6 and 7 DP 18290

A.L.R.

DUPLICATE DESTROYED

31 / 9 / 1996

DISTRICT LAND REGISTRAR

Cancelled

OTAGO NEW ZEALAND

2313

Land and Deeds 69

No 10D / 417

References
Prior C/T 92/204

Transfer No
N/C Order No
Abstract 676512

REGISTER

CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT

This Certificate dated the 9th day of April one thousand nine hundred and eighty seven under the seal of the District Land Registrar of the Land Registration District of OTAGO

WITNESSETH that FRANCIS BASIL JACKSON of Otautau, Company Director, ROGER NORMAN MACASSEY OF Dunedin, Solicitor and GRAEME JAMES MARSH of Dunedin, Company Director are

* seised of an estate in fee-simple (subject to such reservations restrictions encumbrances, liens and interests as are notified by memorial underwritten or endorsed hereon) in the land hereinafter described, delineated with bold black lines on the plan hereon be the several admeasurements a little more or less, that is to say All that parcel of land containing 13.376 hectares more or less being Lot 4 Deposited Plan 18290 and being Section 26A Block VII SHOTOVER DISTRICT

ASSISTANT LAND REGISTRAR

Interests at date of issue:

X14821 Irrigation Agreement under Part XI Public Works Act 1928 - 13.11.1952 at 11.32am

DISCHARGE OF MORTGAGE

591839/3 Mortgage to Cook Allan & Co. Nominees Limited - 17.3.1983 at 1.59pm (varied once subsequently)

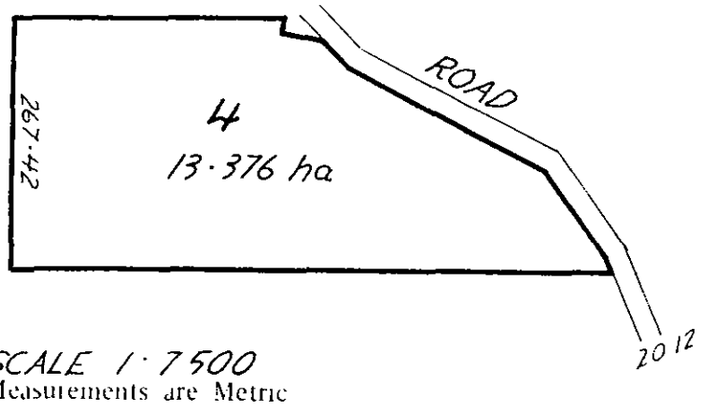
A.L.R.

704697 Variation of Mortgage 591839/3 - 15.6.1988 at 10.47am

A.L.R.

831796 Transfer being a grant of a right (in gross) to convey water over part herein shown marked 'ER' 'ES' on diagram annexed thereto together with incidental rights in favour of Arrow Irrigation Company Limited - 14.6.1993 at 10.46am

A.L.R.



*SCALE 1:7500
*Measurements are Metric

No 10D / 417

Amended version received 26/02/2018

2313

Land and Deeds 69

References
Prior C/T 79/176

Transfer No
N/C Order No
Abstract 676512

No 10D / 418

REGISTER

CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT

This Certificate dated the 9th day of April one thousand nine hundred and eighty seven under the seal of the District Land Registrar of the Land Registration District of O T A G O

WITNESSETH that FRANCIS BASIL JACKSON of Otautau, Company Director, ROGER NORMAN MACASSEY of Dunedin, Solicitor and GRAEME JAMES MARSH of Dunedin, Company Director are

is seised of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by memorial underwritten or endorsed hereon) in the land hereinafter described, delineated with bold black lines on the plan hereon, be the several admeasurements a little more or less, that is to say All that parcel of land containing 25.1972 hectares more or less being Lot 3 Deposited Plan 18290 and Lots 10 and 11 Deposited Plan 18291 and being Sections 79 and 85 Block VII and Section 67 Block VIII SHOTOVER DISTRICT

ASSISTANT LAND REGISTRAR

Interests at date of issue:

DISCHARGED

X14821 Irrigation Agreement under Part XI Public Works Act 1928 - 13.11.1952 at 11.32am

A.L.R.

DISCHARGE OF MORTGAGE

591839/3 Mortgage to Cook Allan & Co. Nominees Limited - 17.3.1988 at 4.59pm (varied once subsequently)

23 JUN 1989

A.L.R.

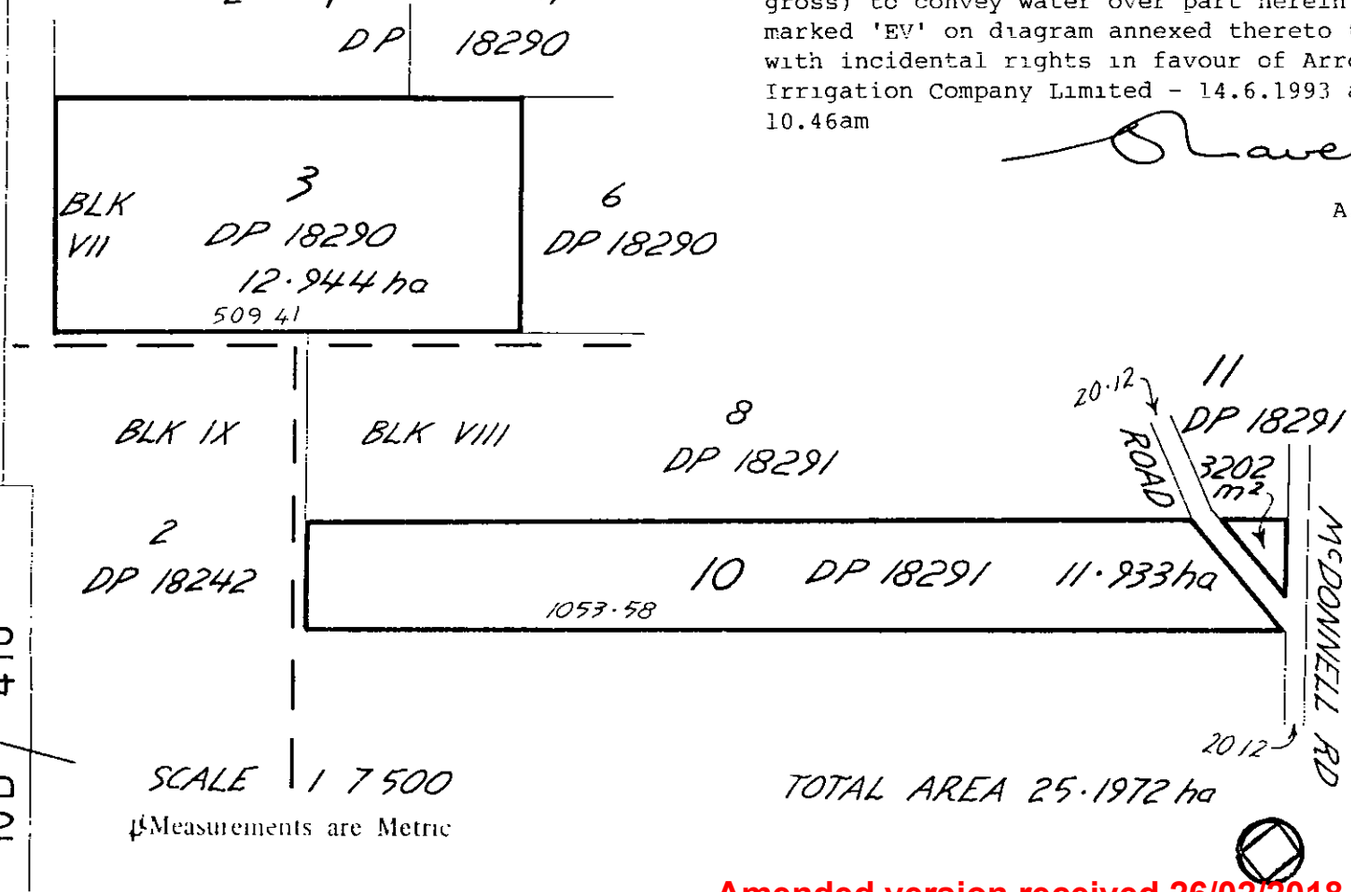
A.L.R.

704697 Variation of Mortgage 591839/3 - 15.6.1988 at 10.47am

A.L.R.

831796 Transfer being a grant of a right (in gross) to convey water over part herein shown marked 'EV' on diagram annexed thereto together with incidental rights in favour of Arrow Irrigation Company Limited - 14.6.1993 at 10.46am

A.L.R.



SCALE 1 7500

All Measurements are Metric

TOTAL AREA 25·1972 ha

No 10D / 418

Amended version received 26/02/2018

2313

QuickMap Title Details

Information last updated as at 13 Nov 2017

COMPUTER FREEHOLD REGISTER
DERIVED FROM LAND INFORMATION NEW ZEALAND

Identifier	**OT17D/659**
Land Registration District	**Otago**
Date Issued	03 September 1996

Prior References

OT8D/149

Type	Fee Simple
Area	11.7280 hectares more or less
Legal Description	Lot 5 Deposited Plan 18290

Proprietors

Hogans Gully Farming Limited

831796 Transfer creating the following easements in gross together with incidental rights - 14.6.1993 at 10.46 am

Type	Servient Tenement	Easement Area	Grantee	Statutory Restriction
Convey water	Lot 5 Deposited Plan 18290 - herein	EQ Transfer 831796	Arrow Irrigation Company Limited	

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 7157449.1 - 12.12.2006 at 9:00 am

Land Covenant in Easement Instrument 7157449.3 - 12.12.2006 at 9:00 am

Land Covenant in Easement Instrument 7157449.4 - 12.12.2006 at 9:00 am

Land Covenant in Easement Instrument 10607554.1 - 8.6.2017 at 5:11 pm

Amended version received 26/02/2018

2313

QuickMap Title Details

Information last updated as at 13 Nov 2017

COMPUTER FREEHOLD REGISTER
DERIVED FROM LAND INFORMATION NEW ZEALAND

Cancelled

Identifier	**OT17D/660**
Land Registration District	**Otago**
Date Issued	03 September 1996

Prior References

OT8D/150

Type	Fee Simple
Area	20.6896 hectares more or less
Legal Description	Lot 6-7 Deposited Plan 18290

Proprietors

790485.2 Transfer creating the following easements - 17.10.1991 at 9.35 am

Type	Servient Tenement	Easement Area	Dominant Tenement	Statutory Restriction
Convey water	Lot 6 and Lot 7 Deposited Plan 18290 - herein	C Transfer 790485.2	Part Lot 3 Deposited Plan 15648 - CT OT17A/65	
Convey water	Lot 6 and Lot 7 Deposited Plan 18290 - herein	C Transfer 790485.2	Lot 1 Deposited Plan 24969 - CT OT17A/64	

831796 Transfer creating the following easements in gross together with incidental rights - 14.6.1993 at 10.46 am

Type	Servient Tenement	Easement Area	Grantee	Statutory Restriction
Convey water	Lot 6-7 Deposited Plan 18290 - herein	ET Transfer 831796	Arrow Irrigation Company Limited	

5401197.1 Transmission to Roger Norman Macassey and Graeme James Marsh - 13.11.2002 at 9:00 am

6021261.1 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 27.5.2004 at 9:00 am

6021261.2 Certificate pursuant to Section 224(c) Resource Management Act 1991 (affects DP 333857) - 27.5.2004 at 9:00 am

6021261.3 CTs issued - 27.5.2004 at 9:00 am \

Legal Description	Title
Lot 1 Deposited Plan 333857 and Lot 6 Deposited Plan 18290	138690
Lot 2 Deposited Plan 333857	138691

\ \CANCELLED

Historic Owners

Amended version received 26/02/2018

2313

FRANCIS BASIL **JACKSON** ROGER NORMAN **MACASSEY** GRAEME JAMES **MARSH**

Issued Titles

138690 (Cancelled) Lot 1 Deposited Plan 333857 and Lot 6 Deposited Plan 18290 and Lot 8 Deposited Plan 18291
138691 (Live) Lot 2 Deposited Plan 333857

Amended version received 26/02/2018

Image Quality due to Condition of Original

2313

DUPLICATE DESTROYED
11 FEB 1937

Registered Book
Fol. 47 Folio 179

No. 10600
Grant under
Otago Waste Lands Act 1872

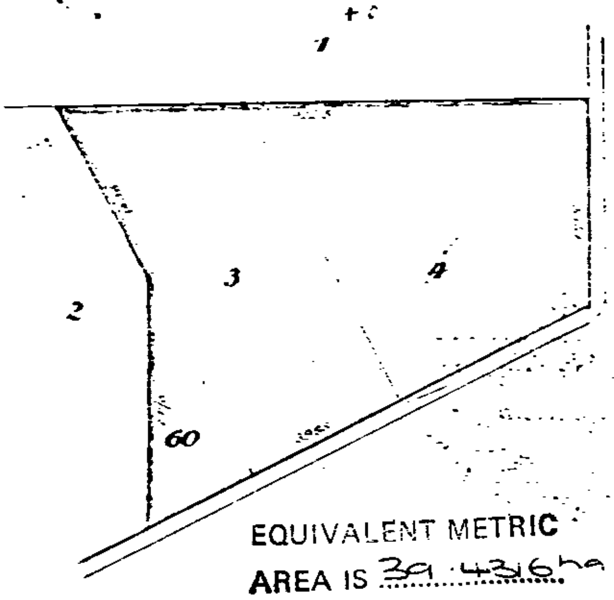
Lot 3 etc.

Victoria, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen:

TO ALL to whom these Presents shall come, Greeting:

Know Ye that, for good considerations Us thereunto moving, We, for Us, our Heirs and Successors, do hereby Grant unto *Jens Hanson of the Town of Inverleith in the Provincial District of Otago Farmer his* Heirs and Assigns, All that Parcel of Land in our Provincial District of *Otago* in our Colony of New Zealand, containing by admeasurement *Ninety seven (97) acres one rood and thirty (30) poles more or less which is the Shelover District being sections numbered respectively three (3) four (4) and Sixty (60) Block eight (VIII) on the Map of the said District bounded towards the North by section numbered 1 four thousand one hundred and twenty three (4123) links towards the East by a Road line one thousand seven hundred and fifteen (1715) links towards the South East by a Road line three thousand nine hundred and eighty five (3985) links towards the West by section numbered 2 two thousand one hundred and seventy five (2175) links and towards the South West by section numbered 2 one thousand four hundred and ninety six (1496) links*

Blk VIII Shelover Dist
97. 1. 30. etc.



EQUIVALENT METRIC AREA IS 39.4316ha

Scale *10 chains = 1 inch*

Surveyed by *C. M. Barr*
Chief Surveyor *W. Arthur*
Draftsman

As the same is delineated on the Plan drawn in the margin hereof, WITH all the Rights and Appurtenances thereto belonging: to hold unto the said *Jens Hanson* his Heirs and Assigns, for ever.

Given the twenty fifth day of July One thousand eight hundred and seventy six.

In testimony whereof We have caused this our Grant to be sealed with the Seal of our Colony of New Zealand.

Witness our Trusty and Well-beloved *Sir Hercules George Robert Robinson Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George* Governor and Commander-in-Chief in and over the Colony of New Zealand and its Dependencies, and Vice-Admiral of the same, at *Wellington* this *ninth* day of *October* in the *forty third* year of our Reign, and in the year of our Lord One thousand eight hundred and seventy-*nine*

No. *20573*

Reg.

Index No. *21165*

Hercules Robinson

Amended version received 26/02/2018

2313

47/179

Transfer No. ... Jans Hansen to David Craig Jolly received at 11.30 o'clock ... May 1895

~~Cancelled ...~~

Transmission No. 4169 Alfred Miller and William Jolly executors of the Will of David Craig Jolly deceased who died on 9th December 1903 are hereby registered as proprietors of above described land. Particulars entered 15th September 1904 at 1 o'c

Transfer No. 38841 Alfred Miller and William Jolly to William Jolly of Arrow Junction Farmer Entered 15th September 1904 at 1 o'c

Caveat No. 2341 by William Jolly Entered 4th March 1913 at 3.30 o'c

Caveat No. 2367 by Graham Dick Baird Entered 5th March 1913 at 11.45 o'c

Withdrawal of Caveat No. 2341 Entered 30th January 1914 at 3.20 o'c

Withdrawal of Caveat No. 2367 Entered 30th January 1914 at 3.20 o'c

Transfer No. 79500 William Jolly to Graham Dick Baird Entered 30th January 1914 at 3.20 o'c

Mortgage No. 43946 Graham Dick Baird to William Jolly Entered 30th January 1914 at 3.20 o'c

Transfer No. 79501 of Mortgage No. 43946 William Jolly to Alice Jolly Entered 30th January 1914 at 3.20 o'c

Transmission No. 9920 to Bessie Paterson Baird of Lake Hayes Widow. Entered 13/11/1919 at 3 ...

Variation of the Terms of Mortgage No. 43946 produced 2/2/20 at 10.30 ...

Extension of Mortgage No. 43946 produced 21st February 1925 ...

Mortgage No. 61718 Bessie Paterson Baird to Alfred ... produced 7th April 1923 at ...

No. 3844 Irrigation Agreement under "The Public Works Amendment Acts 1910 and 1911" between His Majesty the King and Bessie Paterson Baird produced 7th June 1922 at 2.15 ...

X No. ... Certificate of Charge under ... produced ...

Mortgage No. 94976 Alice Jolly to the Commercial Bank of Australia Limited produced 4th March 1936 at 10.40 o'c

Transfer No. 118891 Alice Jolly to ... Charlie ... produced 13th January 1937 at ...

Mortgage No. 94976 ... to the Commercial Bank of Australia ... June 193...

~~Transfer No. 103020 Bessie Paterson Baird to the Ida of Invercargill ... produced 2nd September 1931 at ... (Mortgage ...)~~

Transfer No. 105192 Bessie Paterson Baird to the ... of Invercargill ... produced 5th April 1932 ...

X No. 3225 Certificate of Charge under ... produced ...

DISCHARGED

X No. 3432 Irrigation Agreement under The Public Works Act 1925 between His Majesty the King and Alice Jolly produced 8th January 1934 at 10 o'c

ENTERED at 3 o'clock on the Third day of ... 187..

District Land Registrar.

Registration District of Otago

DATED ... October 187..

97 A. 1 R. 30 P.

Grant

To

Jans Hansen

No. 3520 Certificate of Charge by The Commissioner of Taxes under ... Amendment Act ... produced 21 March ... at 10 ...

DISCHARGED

X No. 3134 Certificate of Charge under Section 180 of the ... Act 19.. produced ...

Entered in Reg. No. 20/8 Folio 110. 17 Nov 1878.

for Commissioner of Crown Lands.

Entered on Record this ... day of October 187..

Reg. No. ...

Folio ...

Under Secretary for Crown Lands.

No. 4637 Certificate of Charge by The Commissioner of Taxes under Section ... of The Land and Income Tax Amendment Act 19.. produced 5 March 1935 at ... o'c A.L.R.

X No. 4973 ... 1933 ... 2nd ... o'clock

DISCHARGED

Amended version received 26/02/2018

Image Quality due to Condition of Original

CANCELLED

2313

Volume 1.
Warrant No. 124.
PR VII.9

NEW ZEALAND.

1240

[CERTIFICATE OF TITLE.

Register Book,

Fol. 75 Folio. 21

75/21

Under (C) "The Land Act 1877"

Issued under the written authority of Sir William Francis Drummond Jervois Governor of New Zealand Dated 21st November 1884.

Peter Henderson of Arrow Flat Farmer is now seized of an estate in fee-simple, subject, nevertheless, to such encumbrances, liens, and interests as are notified by Memorial underwritten or indorsed hereon, in that piece of land situated in the District of Shotover containing Twenty seven (27) acres two (2) roods thirty five (35) poles more or less as delineated on the plan hereon edged red.

which said piece of land is Section Twenty six (26) Block Seven (VII) delineated in the public map of the said District deposited in the Office of the Chief Surveyor, Dunedin, originally granted purchased from the Crown the twenty seventh day of July 1882.

In witness whereof I have hereunto signed my name and affixed my seal, this thirty first (31st) day of March one thousand eight hundred and eighty five (1885).

Signed in the presence of
H. Keller asst DLR
the 31st day of March 1885

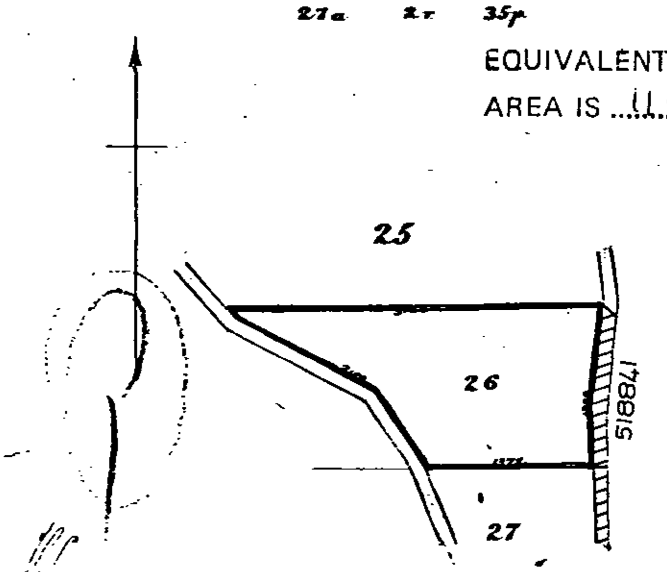
H Turton
District Land Registrar
of the District of Otago

OTAGO DISTRICT LAND REGISTRY NEW ZEALAND

The above described land is liable to have roads taken and laid out thereover for public use by the Crown under section 160 of "The Land Act 1877"
H Turton DLR

Block VII Shotover District
27a 2r 35p

EQUIVALENT METRIC AREA IS 11.2174 ha



Scale 10 Chains to an inch.
Surveyed by J. Howden Decr 1864.
W Arthur Chief Surveyor
H. Shey Chief Draftsman

428—1409]

Mortgage No 8262 Peter Henderson to The Scottish and New Zealand Investment Company Limited produced 9th September 1882 at 12.45 oc
H Turton DLR

Discharge of Mortgage No 8262 entered 17th January 1887 at 10 o'clock
H Turton DLR

Transfer No 26503 Peter Henderson to Charles Low Entered 24th July 1895 at 2.40 o'clock
H Turton a.l.r.

Mortgage No 18501 Charles Low to The Colonial Bank of New Zealand Entered 29th March 1897 at 2.30
DISCHARGED
H. Turton DLR

Transmission No 22733
Mortgage No 18501 vested in The Bank of New Zealand by virtue of The Bank of New Zealand and Banking Act 1895 Entered 29th March 1897 at 2.30 oc
H Turton DLR

Amended version received 26/02/2018

(OVER)

75/21

75/ 21

Transmission No 11494 to The Public Trustee entered 28th February 1923 at 2.40 o'c. Kneeminian AL

Transfer No 56704 The Public Trustee to Samuel Low and Hector Low both of Arrow Flat farmers as tenants in common in equal shares produced 23rd May 1924 at 3 o'c. W. A. Nelson AL

Transfer No 89351 Samuel Low and Hector Low to Charles Wood Swann of Cowburn Farmer produced 11th March 1925 at 3 o'c Kneeminian AL

Mortgage No 67983 Charles Wood Swann to William Herbert Hill produced 1st June 1925 at 11.30 o'c Kneeminian ALR DISCHARGED DISCHARGED

Transfer No 93997 of Mortgage No 67983 William Herbert Hill to Robert John Swann produced 11th August 1926 at 10.45 o'c Kneeminian AL

Irrigation Agreement [illegible] under the Public [illegible] between Charles Wood Swann and His Majesty the King produced [illegible] 1928 at [illegible] N Nelson Kneeminian AL

Mortgage No [illegible] Charles Wood Swann to the State Advances Superintendent produced [illegible] 1928 at [illegible] DISCHARGED Kneeminian AL

X No 5406 Irrigation Agreement under the Public Works Act 1928 between Charles Wood Swann and His Majesty the King produced [illegible] DISCHARGED N Nelson AL

X No 3531 Certificate of Charge by the Commissioner of Taxes under Section 11 of the Land and Income Tax Amendment Act 1921 produced [illegible] March 1931 at 10 o'c. DISCHARGED N Nelson A.L.R.

X No 3741 Certificate of Charge under Section 280 of the Public Works Act 1928 produced 11th May 1934 at 12 o'c N Nelson DISCHARGED ALR

X No 5415 Irrigation agreement under the Public Works Act 1928 between His Majesty the King and Charles Wood Swann produced 30th April 1936 at 3 o'c N Nelson ALR DISCHARGED

X No. 9649 [illegible] the Public [illegible] July [illegible] 7th DISCHARGED DISCHARGED ALR

X No. 9991 [illegible] the Public Works [illegible] 2 [illegible] DISCHARGED ALR

X. No. 11263 [illegible] 280 of the Public Works Act [illegible] 3rd day of August [illegible] DISCHARGED

X. No. 14821 Irrigation Agreement under Part IV Public Works Act 1928 between Her Majesty the Queen and Charles Wood Swann produced 3 [illegible] 1952 at 11.30 o'c N [illegible] ALR

Transfer 20[illegible] Charles Wood Swann to Robert John Swann of Arrowtown farmer produced 3rd December 1958 at 2.45 o'c [illegible] ALR

Mortgage 178586 Robert John Swann to the National Bank of New Zealand Limited produced [illegible] January 1959 at 2 o'c DISCHARGED ALR

Mortgage 178634 Robert John Swann to Charles Wood Swann produced 3rd February 1959 at 2 o'c DISCHARGED ALR

Variation of Mortgage 178634 produced 2nd July 1959 at 2.45 o'c ALR

244585 Transmission of Mortgage 178634 to Thomas Arthur Swann of Lowburn Orchardist as executor entered 6.4.1962 at 10.50 o'c ALR

259453 Transfer being grant of right to take and fourgd stone from the within land for term 3 years from 30 April 1962 Robert John Swann to J Fraser and Sons Limited 21/6/1963 at 10.41 am Dec LSP Act [illegible] ALR

274356 Transfer surrender of rights granted by Transfer 259453 J Fraser & Sons Limited to Robert John Swann 21.7.1964 at 10.14 am ALR

274357 Transfer to [illegible] David Maccombe of Lake Hayes, Farmer 21.7.1964 at 10.41 am ALR

274358 [illegible] DISCHARGED DISCHARGED ALR

274359 [illegible] 21.7.1964 [illegible] DISCHARGED ALR

344116 Mortgage [illegible] Limited 8-8-1969 30 JUN 1975 ALR

344117 Memorandum of Priority ranking Mortgage 344116 as a first Mortgage & Mortgage 274359 as a second Mortgage 8-8-1969 at 11.10 am ALR

369827 Mortgage to State Advances Corporation of New Zealand [illegible] 20 pm DISCHARGED 12 SEP 1978 ALR

2313

426611 Mortgage to The State Advances Corporation of New Zealand - 25.7.1974 at 9.24 am.

DISCHARGED 12 SEP 1978

A.L.R.

470131 Mortgage to The Rural Banking and Finance Corporation of New Zealand - 5.8.1978 at 11.42 am

DISCHARGED 12 SEP 1978

A.L.R.

503226/5 Transfer to Stacey Andrew Radford of Hawarden Farmer - 12.9.1978 at 12.04 pm

A.L.R.

503226/6 Mortgage to Bank of New South Wales Savings Bank (N.Z.) Limited - 12.9.1978 at 12.04 pm

DISCHARGED 2 MAY 1984

A.L.R.

503226/7 Mortgage to Vincent David Stancombe - 12.9.1978 at 12.04 pm

DISCHARGED 2 MAY 1984

A.L.R.

512241 Mortgage to the Rural Banking and Finance Corporation of New Zealand - 7.3.1979 at 10.45 am

DISCHARGED

A.L.R.

Notice that the unnamed road adjoining the within land and hatched black on the diagram hereon has been stopped and is now known as Section 97 Block VII Shotover Survey District
New C.T.8A/667 issued
See Application 518841.

McDonnell

A.L.R.

538672/4 Variation of Mortgage 503226/7 - 24.7.1980 at 12 noon

A.L.R.

554835/4 26.5.1981)Cancelled and new C.T. 8D/149 issued.

A.L.R.

DISTRICT LAND REGISTRAR
CANCELLED
OTAGO
NEW ZEALAND

DUPLICATE DESTROYED
30/6/1981

Amended version received 26/02/2018

2313

77/109

FR VII. 130

Volume I.
Warrant No 145
(C)

Under
The Land Act 1877

NEW ZEALAND.
1534

[CERTIFICATE OF TITLE.

Register Book,
Vol. 77 Folio. 109

Issued under the written authority of Sir William Francis Drummond Jervois, Governor of New Zealand, Dated 13th August 1886.

Charles Low of Shotover District Farmer is now seized of an estate in fee-simple, subject, nevertheless, to such encumbrances, liens, and interests as are notified by Memorial underwritten or indorsed hereon, in that piece of land situated in the District of Shotover containing Fifty (50) acres more or less as delineated on the plan hereon edged red and intersected by a road one hundred (100) links wide colored brown on said plan

which said piece of land is Section Twenty seven (27) Block Seven (VII) delineated in the public map of the said District deposited in the Office of the Chief Surveyor, Dunedin, and was originally purchased from the Crown the fifth day of January 1883. by Charles Low the younger

In witness whereof I have hereunto signed my name and affixed my seal, this thirty first (31st) day of December one thousand eight hundred and eighty seven (1887)

Signed in the presence of
H.H. Fuller Asst Clk.
the 31st day of Decr. 1885

N Turton
District Land Registrar
of the District of Otago

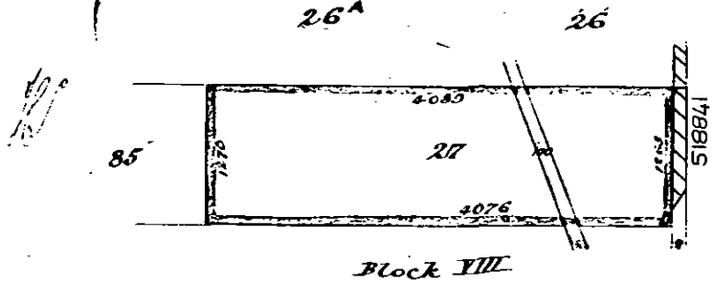
OTAGO DISTRICT LAND REGISTRY NEW ZEALAND

The above described land is liable to have roads taken and laid out thereover for public use by the Crown under section 160 of The Land Act 1877

N Turton
DLR

Block VII Shotover Dist.
50a Or OOp.

EQUIVALENT METRIC AREA IS 20.2343 ha



Block VIII

Scale 10 Chains to an inch.
Surveyed by F. Howden Dec. 1864
C.W. Adams Chief Surveyor
H. Skey Chief Draftsman

Mortgage No 9434 Charles Low to Henry Livingston produced 16th October 1888 at 11.50 am
N Turton
DLR

Transmission No 9434
An Order having been granted on the 3rd December 1888 to the Public Trustee to administer the estate of Henry Livingston deceased who died on the 13th August 1888 the said Public Trustee is registered as Proprietor of Mortgage No 9434 Application received and particulars entered this 4th March 1889 at 9 o'clock
N Turton
DLR

Discharge of Mortgage No 9434 Entered 5th July 1889 at 11 h 40 m o'clock
N Turton
DLR

OVER...

Amended version received 26/02/2018

2313

77/109

77/109

Mortgage No 13797 Charles Low to the Colonial Bank of New Zealand Entered 5th July 1889 11.40 a.m. DISCHARGED DISCHARGED

Transmission No 2165

Mortgage No 13797 vested in the Bank of New Zealand by virtue of the Bank of New Zealand and Banking Act 1895 Entered 13 ... 1896 at 3 o'clock.

Transmission No 11694 to The Public Trustee Entered 21st February 1923 at 2 p.m.

Transfer No 86704 The Public Trustee to Samuel Low and Hector Low both of Arrowtown farmers as tenants in common in equal shares produced 23rd May 1924 at 3 o'c

Transfer No 89351 Samuel Low and Hector Low to Charles Wood Swann of Lowburn Farmer produced 11th March 1925 at 3 o'c

Mortgage No 67983 Charles Wood Swann to William Herbert Hide produced 1st June 19.. DISCHARGED

Transfer No 93597 of Mortgage No 67983 William Herbert Hide to Robert ... Swann produced 11th August 1926 at 10.45 a.m.

Irrigation Agreement ... under the Public Works Amendment Acts ... between Charles Wood Swann and His Majesty the King produced ... August 1928 at ... cancellation produced 29 March 1933 at 10 a.m. DISCHARGED

Mortgage ... Charles Wood Swann to the State Advances Superintendent produced ... September 1928 DISCHARGED

X No 3406 Irrigation Agreement under The Public Works Act 1928 between Charles Wood Swann and His Majesty the King produced 19th March ... at 10 a.m. DISCHARGED

X No 3531 Certificate of Charge ... The Commissioner of ... DISCHARGED 15 JAN ...

X No 3744 Certificate of Charge under Section 280 of the Public Works Act 1928 produced ... July 1935 at ... DISCHARGED

X No 5416 Irrigation Agreement under the Public Works Act 1928 between His Majesty the King and Charles Wood Swann produced 30th April 1936 at ... DISCHARGED

X. No. 9699 ... the Public ... DISCHARGED ... 1950 ... DISCHARGED

X. No. 9991 ... the Public Works ... 2 o'clock. DISCHARGED

X. No. 10265 ... the Public Works Act, 19.. ... 3rd ... August ... 12 o'clock DISCHARGED

X. No 14827 Irrigation Agreement under Part V Public Works Act 1928 between Her Majesty the Queen and Charles Wood Swann produced 13 December 1952 at 11.32 o'c

Transfer 211478 Charles Wood Swann to Robert John Swann of Arrowtown Farmer produced 3rd December 1955 at 2.45 pm

Mortgage 178578 Robert John Swann to The National Bank of New Zealand Limited produced ... January 1959 at eight DISCHARGED

Mortgage 178634 Robert John Swann to Charles Wood Swann produced ... February 1959 at 2.40 o'c DISCHARGED

Variation of Mortgage 178634 produced 9th July 1959 at 2.45 pm

264585 Transmission of Mortgage 178634 to Thomas Arthur Swann of Lowburn Orchardist as executor entered 6.4.1962 at 10.50 am

259453 Transfer ... right to take ... water ... within ... years from 30th April 1962 Robert John Swann to J Fraser and Sons Limited 21/6/1962 at 10.41 am

274356 Transfer ... rights granted by Transfer 259453 J Fraser and Sons Limited to Robert John Swann 21 7 1964 at 10.14 am

274357 Transfer to Vincent David ... Farmer 21 7 1964 at 10.21 am

274358 Mortgage ... DISCHARGED ... 1969 21 7 1964 at ...

274359 Mortgage to John Caldwell 21 7 1964 at ... DISCHARGED

... Mortgage ... at 11.10 am

344117 Memorandum of Priority ranking Mortgage 344116 as a first Mortgage and Mortgage 274359 as a second Mortgage ... 8 8 1969 at 11 a.m.

369827 Mortgage ... to the State Advances Corporation ... at 11.20 ... 5 1971 DISCHARGED 12 SEP 1978

Amended version received 26/02/2018

- OVER -

77/109

THIS REPRODUCTION (ON A REDUCED SCALE) CERTIFIED TO BE A TRUE COPY OF THE ORIGINAL REGISTER FOR THE PURPOSES OF SECTION 215A LAND TRANSFER ACT 1952.
A.L.R.

77/109

2313

DISCHARGED
12 SEP 1978
A.L.R.

426611 Mortgage to The State Advances Corporation of New Zealand - 25.7.1974 at 9.24 am.

A.L.R.

DISCHARGED
15 SEP 1978
A.L.R.

470131 Mortgage to The Rural Banking and Finance Corporation of New Zealand - 12.12.1976 at 11.42 am

A.L.R.

503226/5 Transfer to Stacey Andrew Radford of Hawarden Farmer - 12.9.1978 at 12.04 pm

A.L.R.

DISCHARGED
26 MAY 1981
A.L.R.

503226/6 Mortgage to Bankcorp New South Wales Savings Bank (N.Z.) Limited - 12.9.1978 at 12.04 pm

A.L.R.

DISCHARGED
26 MAY 1981
A.L.R.

503226/7 Mortgage to Vincent David Stancombe - 12.9.1978 at 12.04 pm

A.L.R.

DISCHARGED
4 DEC 1980
A.L.R.

512241 Mortgage to the Rural Banking and Finance Corporation of New Zealand - 7.3.1979 at 10 am

A.L.R.

McDonnell Road

Notice that part unmarked road adjoining the within land and hatched black on the diagram hereon has been stopped and is now known as Section 98 Block VII Shotover Survey District
New C.T.8A/668 issued
See Application 518841.

A.L.R.

538672/4 Variation of Mortgage 503226/7 - 24.7.1980 at 12 noon

A.L.R.

554835/5) Cancelled and new C.T. 8D/150
26.5.1981) issued.

A.L.R.

DISTRICT LAND REGISTRAR
CANCELLED
OTAGO

DUPLICATE DESTROYED
30/6/1981

2313

CANCELLED

PR VII. 131.

Volume I
Warrant No 1165.
(C)
Under
"The Land Act 1877"

NEW ZEALAND. 1535

[CERTIFICATE OF TITLE.

Register Book,
Vol. 77 Folio. 110

77/110

Issued under the written authority of Sir William Francis Drummond Jervois, Governor of New Zealand, Dated 18th August 1885.

Charles Low of Shotover District Farmer is

now seized of an estate in fee-simple, subject, nevertheless, to such encumbrances, liens, and interests as are notified by Memorial underwritten or indorsed hereon, in that piece of land situated in the District of Shotover containing fifty (50) acres more or less as delineated on the plan hereon edged red and intersected by a road One hundred (100) links wide colored brown on said plan

which said piece of land is Section One (1) Block Eight (VIII) delineated in the public map of the said District deposited in the Office of the Chief Surveyor, Dunedin, and was originally purchased from the Crown the fifth day of January 1883 by Charles Low the younger

In witness whereof I have hereunto signed my name and affixed my seal, this thirty first (31st) day of December one thousand eight hundred and eighty five (1885)

Signed in the presence of
H. Gully Asst. DLR
the 31st day of Dec. 1885

H. Justice
District Land Registrar
of the District of Otago

OTAGO DISTRICT LAND REGISTRY NEW ZEALAND

The above described land is liable to have roads taken and laid out thereover for public use by the Crown under section 166 of "The Land Act 1877".

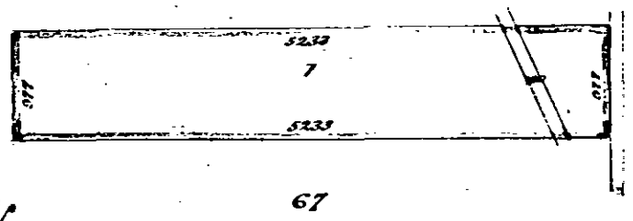
H. Justice
DLR

Block VIII Shotover Dist.
50a or 00p.

EQUIVALENT METRIC
AREA IS 20·2343 ha

New Plan 18291

Block VIII



67

Scale 10 Chains to an inch
Surveyed by G. M. Barr April 1865
C. W. Adams Chief Surveyor
H. Skey Chief Draftsman

Mortgage No 9431 Charles Low to Henry Livingston produced 16th October 1885 at 11.50 a.m.
H. Justice
DLR

Transmission No 916
An order having been granted on the 3rd December 1888 to The Public Trustee to administer the estate of Henry Livingston deceased who died on the 12th August 1888 the said Public Trustee is registered as proprietor of Mortgage No 9431 Application received and particulars entered the 20th March 1889 at 3 o'clock
H. Justice
DLR

Discharge of Mortgage No 9434 Entered 5th July 1889 at 11.00 o'clock
H. Justice
DLR

[428—1865]

Amended version received 26/02/2018

2313

77/110

77/110

Mortgage No 13797 Charles Low to the Colonial Bank of New Zealand Entered 5th [illegible] at 11.40 o'clock [illegible] DISCHARGED

DISCHARGED [illegible]

Transmission No 2165 Mortgage No 13797 vested in The Bank of New Zealand by [illegible] of the Bank of New Zealand and [illegible] Banking Act 1895 [illegible] November [illegible]

Transmission No 16494 to The Public Trustee Entered 20th February 1923 at 2.40 o'c

Transfer No 86704 The Public Trustee to Samuel Low and Hector Low both of Arrow Flat farmers as tenants in common in equal shares produced 23rd May 1924 at 3 o'c

Transfer No 89351 Samuel Low and Hector Low to Charles Wood Swan of Lowburn Farmer produced 11th March 1925 at 3 o'c

Mortgage No 67883 Charles Wood Swan to [illegible] Herbert Hide produced 1st June 193[illegible] at 11 o'c DISCHARGED

Transfer No 93597 of Mortgage No 67883 William Herbert Hide to Robert Alan Brown produced 11th August 1926 at 10.45 o'c

Irrigation Agreement [illegible] under the Public Works Amendment [illegible] between Charles Wood Swan and His Majesty the King produced [illegible] March 1933 at 10 o'c

Mortgage [illegible] Charles Wood Swan to the State Advances Superintendent produced [illegible] at [illegible] DISCHARGED

X No 3406 Irrigation Agreement under The Public Works Act 1928 between Charles Wood Swan and His Majesty the King produced 29th [illegible] at [illegible] DISCHARGED

X No 3531 Certificate of Charge by The Commissioner of [illegible] Amendment Act [illegible] DISCHARGED

X No 3714 Certificate of Charge under Section 280 of the P. W. Works Act 1928 produced [illegible] DISCHARGED

X No 5415 Irrigation Agreement under The Public Works Act 1928 between His Majesty the King and Charles Wood Swan produced 30th April 1936 at 3 o'c DISCHARGED

X No 9699 [illegible] the Public [illegible] 4th [illegible] July 1943 [illegible] DISCHARGED

X No 9991 Certificate [illegible] the Public Works Act [illegible] August [illegible] DISCHARGED

X No 10265 [illegible] the Public Works Act 1928 [illegible] August [illegible]

X No 14201 Irrigation Agreement under Part IV Public Works Act 1928 between Her Majesty the Queen and Charles Wood Swan produced [illegible] 1952 at 11.32 o'c

Transfer 211478 Charles Wood Swan to Robert John Swann of Arrowtown Farmer produced 3rd December 1958 at 2.45 o'c

Mortgage 178596 Robert John Swann to The National Bank of New Zealand Limited produced 30th January 1958 at [illegible] DISCHARGED

Mortgage 178634 Robert John Swann to Charles Wood Swann produced 3rd February 1958 at 2.00 DISCHARGED

Variation of Mortgage 178634 produced 9th July 1959 at 2.45 o'c

244585 Transmission of Mortgage 178634 to Thomas Arthur Swann of Lowburn Orchardist as executor entered 6.4.1962 at 10.50 o'c

259453 Transfer being part of right to take [illegible] water from the [illegible] within [illegible] 1433 [illegible] from 30th April [illegible] Robert John Swann to J Fraser & Sons Limited 21/6/1963 at 10.41 am

[illegible] 2/5/64

274336 Transfer surrender of rights granted by Transfer 259453 A Fraser & Sons Limited to Robert John Swann 21.7.1964 at 10.21 am

274337 Transfer to Vincent David [illegible] of [illegible] Farmer 21.7.1964 at 10.21 am

274338 [illegible] to [illegible] Russell [illegible] 21.7.1964 [illegible] DISCHARGED 12 SEP 1978

274339 Mortgage to [illegible] Russell Leonard [illegible] 21.7.1964 at 10.2[illegible] DISCHARGED 20 JUN 1975

344110 Mortgage to Russell Leonard [illegible] 8.8.1969 at 11 am

344407 Memorandum of Priority [illegible] Mortgage 344116 as a first Mortgage and Mortgage 274339 as a second Mortgage 8.8.1969 at 11 am

369827 Mortgage to State Advances Corporation of New Zealand [illegible] 11.20 am DISCHARGED 12 SEP 1978

Amended version received 26/02/2018

— OVER

C.T. 77/110

77/110

THIS REPRODUCTION (ON A REDUCED SCALE) CERTIFIED TO BE A TRUE COPY OF THE ORIGINAL REGISTER FOR THE PURPOSES OF SECTION 215A LAND TRANSFER ACT 1952.
A.L.R.

2313

426611 Mortgage to The State Advances Corporation of New Zealand - 25.7.1974 at 9.24 am

DISCHARGED 12 SEP 1978

A.L.R.

470131 Mortgage to The Rural Banking and Finance Corporation of New Zealand - 6.12.1978 at 11.42 am

DISCHARGED 12 SEP 1978

A.L.R.

503226/5 Transfer to Stacey Andrew Radford of Hawarden Farmer - 12.9.1978 at 12.04 pm

A.L.R.

503226/6 Mortgage to Bank of New South Wales Savings Bank (N.Z.) Limited - 12.9.1978 at 12.04 pm A.L.R.

DISCHARGED 26 JAN 1981

A.L.R.

503226/7 Mortgage to Vincent David Stancombe - 12.9.1978 at 12.04 pm

DISCHARGED 26 JAN 1981

A.L.R.

512241 Mortgage to the Rural Banking and Finance Corporation of New Zealand - 7.3.1979 at 10.55 am

DISCHARGED

A.L.R.

A.L.R.

538672/4 Variation of Mortgage 503226/7 - 24.7.1980 at 12 noon

A.L.R.

554835/6 Transfer to Walter REid Jackson of Dunedin Chartered Accountant - 26.5.1981 at 10.54 am

A.L.R.

554835/7 Mortgage to Cook Allan & Co. Nominees Limited - 26.5.1981 at 10.54 am

DISCHARGED 17 MAR 1983

A.L.R.

A.L.R.

590531 Certificate under Section 221 of the Public Works Act 1981 - 22.2.1983 at 2.20 pm

DISCHARGED 21 NOV 1984

A.L.R.

591839/3 Mortgage to Cook Allan & Co Nominees Limited - 17.3.1983 at 1.59 pm

A.L.R.

630700 Variation of Mortgage 591839/3 - 27.2.1985 at 10.34am

A.L.R.

676512 Transfer to Francis Basil Jackson of Otautau, Company Director, Roger Norman Macassey of Dunedin, Solicitor and Graeme James Marsh of Dunedin, Company Director - 9.4.1987 at 2:32 p.m.

A.L.R.

CANCELLED: SEE NOW ST 10D/415

A.L.R. 15/5/1987

Amended version received 26/02/2018

Image Quality due to Condition of Original

Volume 1. Warrant No. 173.

(C) P.R. 7. 132

NEW ZEALAND. 1827

CANCELLED 2313

[CERTIFICATE OF TITLE.]

Register Book,

Vol. 79 Folio. 176

79/176

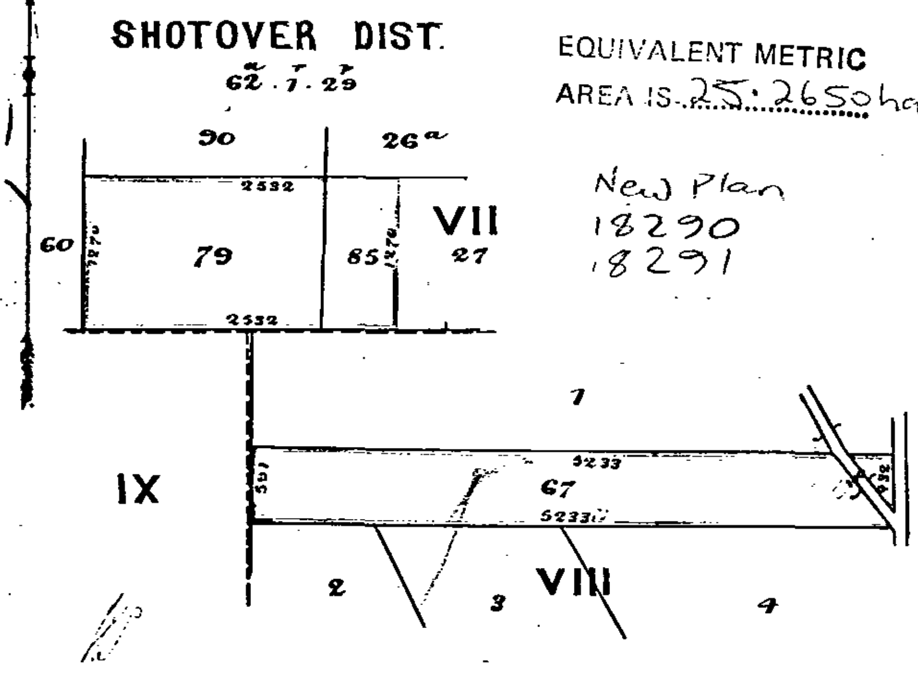
Pursuant to Warrant of His Excellency The Governor of New Zealand dated 4th June 1886

Charles Low of Shotover Farmer is now seized of an Estate in fee-simple, subject as is herein expressed or notified by memorial hereon endorsed, in those pieces of land situated in the District of Shotover containing together sixty-two (62) acres one (1) rood and twenty-nine (29) poles more or less as shown on plan hereon edged red and in part intersected by a Public road one hundred (100) links wide colored brown on said plan hereon which said land is sections seventy-nine (79) eighty-five (85) Block seven (VII) and section sixty-seven (67) Block eight (VIII) delineated in the Public Map of the said District deposited in the office of the Chief Surveyor Dunedin originally acquired from the Crown by the said Charles Low under the provisions of The Land Act 1877 on the 15th day of September 1883.

In witness whereof I have hereunto signed my name and affixed my seal this twenty-third day of June one thousand eight hundred and eighty six.

Signed in the presence of William Christie Clerk Dunedin the 23rd day of June 1886

H Turton
District Land Registrar of the District of Otago.



EQUIVALENT METRIC AREA IS 25.2650 ha

New Plan 18290 18291

Scale, 10 chains to an inch.

Surveyed by J. Spence Oct. 1871

Chief Surveyor: C. W. Adams

Draughtsman: H. Skey

The above described land is liable to have roads taken and laid out thereover for Public use by the Crown under section 160 of The Land Act 1877. H Turton D.L.R.

Mortgage No. 9434 Charles Low to Henry Livingston: entered 16th October 1883 at 11.50 o'clock. H Turton D.L.R.

— Transmission No. 916 —

An Order having been granted on the 3rd December 1888 to The Public Trustee to administer the estate of Henry Livingston above named who died on the 13th August 1888 the said Public Trustee is registered as proprietor of Mortgage No. 9434. Application received and particulars entered the 29 March 1889 at 3 o'clock. H Turton D.L.R.

Discharge of Mortgage No. 9434. Entered 5th July 1889 at 11.40 o'clock H Turton DLR

Mortgage No. 13797 Charles Low to The Colonial Bank of New Zealand Entered 5th July 1889 at 11.40 o'clock H Turton DLR

DISCHARGED

— Transmission No. 2165 —

Mortgage No. 13797 vested in the Bank of New Zealand by virtue of "The Bank of New Zealand and Banking Act 1895" Entered 16th November 1896 at 3 p.m. DDLR

Transmission No. 11694 to The Public Trustee Entered 28th February 1923 at 2.40 p.m. ADLR

over

Amended version received 26/02/2018

2313

Transfer No. 86704 The Public Trustee to Hector Low and Samuel Low of Arrow Flat farmers as tenants in common in equal shares produced 23rd May 1919 at 3 o'c.

W. A. Wilson A.L.R.

Transfer No. 93351 Hector Low and Samuel Low to Charles Wood Swann of Lowburn farmer produced 11th March 1925 at 3 o'c

Kennan A.L.R.

Mortgage No. 97583 Charles Wood Swann to William Herbert Hyde produced 9th June 1925 at 11.30 Kennan DISCHARGED

DISCHARGED 4/7/28

Transfer No. 93897 William Herbert Hyde to Robert Moore Brown produced 11th August 1926 at 10.45 o'c

Kennan A.L.R.

Irrigation Agreement Licence under The Public Works Amendment Acts 1910 and 1911 between Charles Wood Swann and His Majesty the King produced ... at ... o'c

Kennan A.L.R.

Mortgage No. 78309. Charles Wood Swann to The State Advances Superintendent produced 4th September 1928 at 3 o'c

Kennan DISCHARGED A.L.R.

X No. 2406 Irrigation Agreement under The Public Works Act 1928 between Charles Wood Swann and His Majesty the King produced 29th ... 1931 at 10 o'c

N. M. Wilson A.L.R. DISCHARGED

X No. 3531 Certificate of Charge by The Commissioner of Taxes under Section 11 of the Land and Income Tax Amendment Act 1924 produced ... March 1934 at 10 o'c. DISCHARGED

N. M. Wilson A.L.R.

X No. 3741 Certificate of Charge under Section 280 of the Public Works Act 1928 produced 11th July 1934 at 12.23 N. M. Wilson

N. M. Wilson A.L.R. DISCHARGED

X. No. 5418 Irrigation agreement under The Public Works Act 1928 between the King and Charles Wood Swann produced 30th April 1936 at 3 o'c DISCHARGED

N. M. Wilson A.L.R.

X. No. 9698 Certificate under section 280 of the Public Works Act, 1928 produced 7th March 1942 ... day of ... at ... o'clock. DISCHARGED

X. No. 9991 Certificate ... the Public Works Act ... 5th August ... at 2 o'clock. DISCHARGED

N. M. Wilson A.L.R.

X. No. 10265 Certificate ... the Public Works Act, 1928 ... 3rd day of August ... at ... o'clock. DISCHARGED

X No. 14821 Irrigation Agreement under Part V Public Works Act 1928 between Her Majesty the Queen and Charles Wood Swann produced 13 November 1950 at 11.32 o'c

A.L.R.

Transfer 24478 Charles Wood Swann to Robert John Swann of Arrowtown farmer produced 3rd December 1958 at 2.45 o'c

A.L.R.

Mortgage 178596 Robert John Swann to The National Bank of New Zealand Limited produced ... January 1959 at 2 o'c DISCHARGED

79/176

Mortgage 178634 Robert John Swann to Charles Wood Swann produced 3rd February 1959 at 2 o'c DISCHARGED A.L.R.

Variation of Mortgage 178634 produced 9th July 1959 at 2.45 o'c DISCHARGED A.L.R.

264585 Transmission of Mortgage 178634 to Thomas Arthur Swann of Lowburn Orchardist as executor entered 6-4-1962 at 10.50 o'c A.L.R.

259453 Transfer giving good right to take coloured stone from the within land from 3 years commencing from 27th April 1962. Robert John Swann to J Fraser and Sons Limited - 21/6/1963 at 10-41 am A.L.R.

See L.S.P. Act. 3/5/66.

274356 Transfer surrender of rights granted by transfer 259453 J. Fraser and Sons Limited to Robert John Swann - ... A.L.R.

274357 Transfer to Vincent David ... of Lake Hayes ... - 21 ... A.L.R.

274358 Mortgage ... and John ... DISCHARGED A.L.R.

274359 Mortgage ... 2-1-1964 at 10.28 ... A.L.R.

DISCHARGED 12 SEP 1978

344116 Mortgage to ... Nominees Limited ... 1969 at ... A.L.R.

DISCHARGED 30 JUN 1975

344117 Memorandum of priority ranking Mortgage 344116 as a first Mortgage and said Mortgage 274359 as a second mortgage - 8-8-1969 at 11.10 am A.L.R.

369827 Mortgage to State Advances Corporation ... 5-5-1971 at 11-20 am A.L.R.

DISCHARGED 12 SEP 1978

THIS REPRODUCTION (ON A REDUCED SCALE) CERTIFIED TO BE A TRUE COPY OF THE ORIGINAL REGISTER FOR THE PURPOSES OF SECTION 215A LAND TRANSFER ACT 1952.

A.L.R.

426611 Mortgage to The State Advances Corporation of New Zealand -25.7.1974 at 9.24 am

DISCHARGED 12 SEP 1978

A.L.R.

470131 Mortgage to The Rural Banking and Finance Corporation of New Zealand 16.12.1976 at 11.42 am

DISCHARGED

A.L.R.

over......

Amended version received 26/02/2018

2313

503226/5 Transfer to Stacey Andrew Radford of Hawarden Farmer - 12.9.1978 at 12.04 pm

A.L.R.

503226/6 Mortgage to Bank of New South Wales Savings Bank (N.Z.) Limited - 12.9.1978 at 12.04 pm

DISCHARGED 26 JUL 1979 A.L.R.

A.L.R.

503226/7 Mortgage to Vincent David Stancombe - 12.9.1978 at 12.04 pm

DISCHARGED 24/7/80 A.L.R.

A.L.R.

512241 Mortgage to the Rural Banking and Finance Corporation of New Zealand - 7.3.1979 at 10.55 am

A.L.R.

538672/4 Variation of Mortgage 503226/7 - 24.7.1980 at 12. noon

A.L.R.

554835/6 Transfer to Walter Reid Jackson of Dunedin Chartered Accountant - 26.5.1981 at 10.54 am

A.L.R.

554835/7 Mortgage to Cook Allan & Co. Nominees Limited - 26.5.1981 at 10.54 am

DISCHARGED 7 MAR 1983 A.L.R.

A.L.R.

590531 Certificate under Section 221 of the Public Works Act 1981 - 22.2.1983 at 2.20 pm

DISCHARGED 7 MAR 1983 A.L.R.

A.L.R.

591839/3 Mortgage to Cook Allan & Co Nominees Limited - 17.3.1983 at 1.59 pm

A.L.R.

630700 Variation of Mortgage 591839/3 - 27.2.1985 at 10.34am

A.L.R.

676512 Transfer to Francis Basil Jackson of Otautau, Company Director, Roger Norman Macassey of Dunedin, Solicitor and Graeme James Marsh of Dunedin, Company Director - 9.4.1987 at 2:32 p.m.

A.L.R.

NULLED: SEE NOW C.T. 101/418 A.L.R. 15/5/1988

Amended version received 26/02/2018

26a 3R VII Shotover Dist

33 - 0 - 00

Pet. Henderson

2313

CANCELLED

SCHEDULE 1.

NEW ZEALAND.

Reference: Vol 2 Warrant No. 1142 P.R. folio

Register-book, Vol. 92, folio 204

1866

92/204

Image Quality due to Condition of Original

CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT.

This Certificate, dated the Twenty third day of April, one thousand eight hundred and ninety-one, under the hand and seal of the District Land Registrar of the Land Registration District of Otago, being a Certificate in lieu of Grant, under Warrant of His Excellency the Governor, in exercise of the powers enabling him in that behalf, Witnesseth that

Peter Henderson of Arrow Settler

is seised of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by memorial underwritten or indorsed hereon; subject also to any existing right of the Crown to take and lay off roads under any Act of the General Assembly of New Zealand) in the land hereinafter described, as the same is delineated by the plan drawn hereon, bordered red, be the several admeasurements a little more or less, which said land is in the said Warrant expressed to have been originally acquired by the said Peter Henderson as from the Thirtieth day of May, one thousand eight hundred and ninety-, under The Land Act 1885, that is to say: All that parcel of land containing Thirty three (33) acres more or less situated in the Shotover District being Section Twenty six A (26A) Block Seven (VII) on the public map of the said District deposited in the Office of the Chief Surveyor Dunedin.

N Purton

District Land Registrar

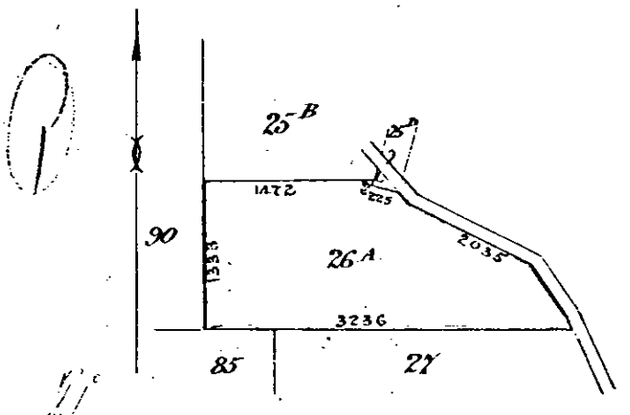
OTAGO DISTRICT LAND REGISTRY

EQUIVALENT METRIC AREA IS 13.3546 hq

Block VII Shotover District

33 . 0 00

New Plan 18290



Scale 10 chains = 1 inch
Surveyed by F.H Wilmot Oct. 1883
Chief Surveyor C.W Adams
Chief Draughtsman H Skey

Transfer No 5503 Peter Henderson to Charles Low Entered 24th July 1895 at 2.40 o'clock N Purton D.L.R.

Mortgage No 18801 Charles Low to the Colonial Bank of New Zealand Entered 29th March 1897 at 2.30 o'c N Purton D.L.R.

DISCHARGED 29/3/13 D.L.R.

DISCHARGED

Transmission No 22233

Mortgage No 18801 vested in the Bank of New Zealand by virtue of the Bank of New Zealand and Banking Act 1895 Entered 29th March 1897 at 2.30 o'c N Purton D.L.R.

Transmission No 11694 to The Public Trustee Entered 28th February 1923 at 2.40 o'c

Transfer No 86704 The Public Trustee to Samuel Low and Hector Low both of Arrow Flat farmers as tenants in common in equal shares produced 23rd May 1924 at 3 o'c

Transfer 109951 Samuel Low and Hector Low to Charles and Susan Low Farmers produced 11th March 1925 at 9 o'c

Mortgage No 67183 Charles Wood Low to William Herbert Hale produced June 1925 at 11.35 o'c

DISCHARGED

Amended version received 26/02/2018

2313

C.T. 92/204

92/204

Transfer 93807 of Mortgage 67583 William Herbert Hall & Robert William Brown produced 11th August 1926 at 10.45 a.m.

Mortgage No. 78309 Charles Wood Swann to The State Advances Superintendent dated 1st September 1928 at 30 [illegible]

X No. 3406 Irrigation Agreement under the Public Works Act 1928 between the Majesty the King and [illegible] produced 30th November 1933 at 10 a.m.

X No. 3531 Certificate of Charge by The Commissioner of Taxes under [illegible] Amendment Act 1926 [illegible]

X No. 3111 Certificate of Charge under Section 226 of the Land & Income Tax Act 1923 produced 7th February 1934 at [illegible]

X No. 5415 Irrigation Agreement under the Public Works Act 1928 between His Majesty the King and Charles Wood Swann produced 30th November 1936 at 3 o'clock

X. No. 9698 [illegible] the Public Works Act 1928 [illegible] dated 31st day of March 1943 [illegible] Judge

X. No. 9991 [illegible] the Public Works Act 1928 [illegible] August 1944 at 2 o'clock

X No. 10265 [illegible] Section 220 of the Public Works Act 1928 [illegible] August [illegible] at 2 o'clock

Y No. 11581 Irrigation Agreement under Part V Public Works Act 1928 between the Majesty the Queen and Charles Wood Swann produced 13 November 1952 at 11.32 a.m.

Transfer 211478 Charles Wood Swann to Robert John Swann of Arowhenua Farmer produced 3rd December 1958 at 2.45 p.m.

Mortgage 178594 Robert J. Swann to The Bank of New Zealand [illegible] dated 30th January 1959 at 2 o'c

Mortgage 178634 Robert John Swann to Charles Wood Swann produced 3rd February 1959 at [illegible]

Variation of Mortgage 178634 produced 9th July 1959 at 2.50 o'c

DISCHARGED

92/204

Re 244585 Transmission of Mortgage 178634 to Thomas Arthur Swann of Lowburn, Orchardist as executor entered 6.4.1962 at 10.50 o'c

259453 Transfer lease and right to take coloured stone from the within land for term of 21 years from 30th April 1962 granted by John Swann to J. Fraser & Sons Limited - 24/4/1963 at 10.41 am

Tie L.S.P. Act 2/5/64

274356 Transfer surrender of the rights granted by Transfer 259453 J. Fraser & Sons Limited to Vincent John Swann - 21.7.1964 at 10.14 a.m.

274357 Transfer to Vincent David Slencombe of Lake Hayes Farmer - 21.7.1964 at 10.21 am

274358 Mortgage to Mark Earle Russell and [illegible] - 21.7.1964 at [illegible]

274359 [illegible] - 21.7.1964 [illegible]

DISCHARGED 12 SEP 1978

DISCHARGED 30 OCT 1975

274359 as a second mortgage

CERTIFICATE OF TITLE, 8.8.1964 at 11.11 a.m.

Vol. 369827, folio [illegible] Mortgage to The State Advances Corporation of New Zealand

DISCHARGED Corporate Seal 12 SEP 1978

THIS REPRODUCTION (ON A REDUCED SCALE) CERTIFIED TO BE A TRUE COPY OF THE ORIGINAL REGISTER FOR THE PURPOSES OF SECTION 215A LAND TRANSFER ACT 1952.

A.L.R.

426611 Mortgage to The State Advances Corporation of New Zealand - 12.5.1964 at 9.24 am

DISCHARGED 12 SEP 1978

A.L.R.

470131 Mortgage to The Rural Banking and Finance Corporation of New Zealand - 6.2.1976 at 11.42 am

DISCHARGED 12 SEP 1978

A.L.R.

over...

Amended version received 26/02/2018

2313

503226/5 Transfer to Stacey Andrew Radford of Hawarden Farmer - 12.9.1978 at 12.04 pm

A.L.R.

DISCHARGED 2 MAY 1981 A.L.R.

503226/6 Mortgage to Bank of New South Wales Savings Bank (N.Z.) Limited - 12.9.1978 at 12.04 pm

A.L.R.

DISCHARGED 2 MAY 1981 A.L.R.

503226/7 Mortgage to Vincent David Stancombe - 12.9.1978 at 12.04 pm

A.L.R.

DISCHARGED 24.7.80 A.L.R.

512241 Mortgage to the Rural Banking and Finance Corporation of New Zealand - 7.3.1979 at 10.55 am

A.L.R.

538672/4 Variation of Mortgage 503226/7 - 24.7.1980 at 12 noon

A.L.R.

554835/6 Transfer to Walter Reid Jackson of Dunedin Chartered Accountant - 26.5.1981 at 10.54 am

A.L.R.

DISCHARGED 17 MAR 1983 A.L.R.

554835/7 Mortgage to Cook Allan & Co. Nominees Limited - 26.5.1981 at 10.54 am

A.L.R.

DISCHARGED 21 NOV 1984 A.L.R.

590531 Certificate under Section 321 of the Public Works Act 1981 - 22.2.1983 at 2.20 pm

A.L.R.

591839/3 Mortgage to Cook Allan & Co Nominees Limited - 17.3.1983 at 1.59 pm

A.L.R.

630700 Variation of Mortgage 591839/3 - 27.2.1985 at 10.34am

A.L.R.

676512 Transfer to Francis Basil Jackson of Otautau, Company Director, Roger Norman Macassey of Dunedin, Solicitor and Graeme James Marsh of Dunedin, Company Director - 9.4.1987 at 2:32 p.m.

A.L.R.

CANCELLED: SEE NOW C.T. 100/417 A.L.R. 15-1-1988

Amended version received 26/02/2018

2313

Image Quality due to Condition of Original

[Land and Deeds—4.

[FORM B.

NEW ZEALAND.

Reference: *Vol.* 47 , *Folio* 179 (Sub)
Transfer No. 118891
Application No.
Order for N/C No.

Register-book,
Vol. 261 , *folio* 55

281/54

CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT.

This Certificate, dated the Twelfth day of January, one thousand nine hundred and thirtyseven under the hand and seal of the District Land Registrar of the Land Registration District of OTAGO Witnesseth that

CHARLES WOOD SWANN of Arrowtown, Farmer

is seised of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by memorial under written or endorsed hereon, subject also to any existing right of the Crown to take and lay off roads under the provisions of any Act of the General Assembly of New Zealand) in the land hereinafter described, as the same is delineated by the plan hereon bordered green, be the several admeasurements a little more or less, that is to say: All that parcel of land containing Ninetyseven (97) acres One (1) rood Thirty (30) perches more or less being Sections Three (3) Four (4) and Sixty (60) Block VIII SHOTOVER DISTRICT.

DISTRICT LAND REGISTRAR OTAGO NEW ZEALAND

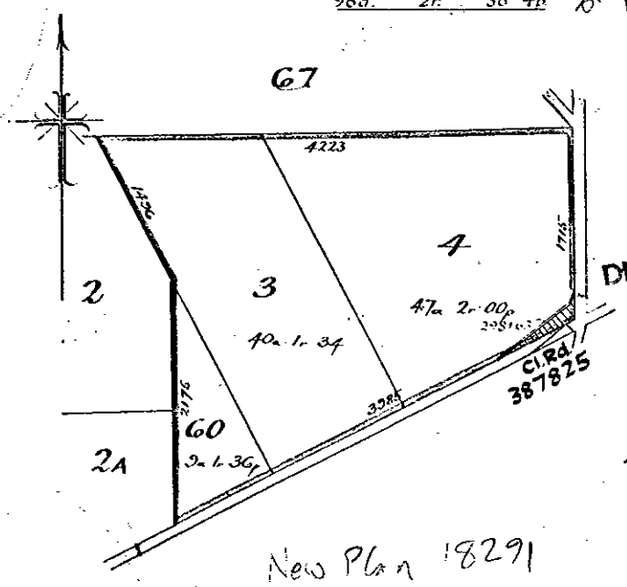
R.C. Lemmay

Asst. ~~District~~ Land Registrar.

EQUIVALENT METRIC AREA IS 39.1442ha

Secs. 3, 4 & 60 Blk VIII Shotover S.D.

Total Area 97a 1r. 30p
Ca. 2r. 33.6p. 298163
96a. 2r. 36 4p



New Plan 18291

Scale, 10 chains to an inch

X.No.3432 Irrigation Agreement under The Public Works Act 1928 between His Majesty the King and Alice Jolly produced 30th January 1934 at 10 o'clock.

DISCHARGED 14 MAY 1956

R.C. Lemmay A.L.R.

Mortgage No. 97182 Charles Wood Swann to Alice Jolly produced 30th January 1937 at 2 o'c.

DISCHARGED

R.C. Lemmay A.L.R.

Mortgage 97183 of Mortgage 97182 Alice Jolly to The Commercial Bank of Australia Limited produced 12th January 1937 at 2 o'c.

DISCHARGED

R.C. Lemmay A.L.R.

X. No. 8120 Agreement under section 200 of the Public Works Act 1928 dated the 13th day of May 1940 made between His Majesty the King and Charles Wood Swann produced 30th January 1941 at 10 o'clock.

DISCHARGED

X 14521 Irrigation Agreement under Part XI Public Works Act 1928 between His Majesty the Queen and Charles Wood Swann produced 1st November 1952 at 11.32 o'

DISCHARGED 21 AUG 1965

Transmission No. 36151 of Mortgage No. 97182 to The Public Trustee. Entered 14th May 1954 at 2.20 p.m.

over

C.T. 281/55

2313

281/55

Transfer 214078 Charles Wood Swann to Robert John Swann of Amowhon Farmer produced 3rd December 1958 at 2.45

A.L.R.

DISCHARGED Mortgage 178596 Robert John Swann to The National Bank of New Zealand Limited produced 30th January 1959 at 2 o'c

A.L.R.

DISCHARGED Mortgage 178634 Robert John Swann to Charles Wood Swann produced 3rd February 1959 at 2.40 o'c

A.L.R.

Variation of Mortgage 178634 produced 9th July 1959 at 2.45 o'c

A.L.R.

244585 Transmission of Mortgage 178634 to Thomas Arthur Swann of Leeston Orchardist as executor entered 6.4.1962 at 10.50 o'c

A.L.R.

259453 Transfer being grant of right to take coloured stone from the within land for 3 years from 30th April 1962 Robert John Swann to J. Fraser & Sons Limited 21/6/1963 at 10.41 am

Dec under LSP Act 2/5/64

A.L.R.

274356 Transfer surrender of rights granted by Transfer 259453 J. Fraser & Sons Limited to Robert John Swann 21.7.1964 at 10.14 am

A.L.R.

274357 Transfer to Vincent David Stancombe of Lake Hayes, Farmer 21.7.1964 at 10.21 am

A.L.R.

DISCHARGED 274358 Mortgage to ... Trustee ... and ... Limited 21.7.1964 at ...

A.L.R.

274359 Mortgage to John Caldwell 21.7.1964 at ...

A.L.R.

DISCHARGED 289588 Compensation Certificate pursuant to section 17 of the Public Works Amendment Act 1948 — 12.8.1965 at 9.32 am

A.L.R.

298163 Gazette Notice declaring the part coloured red on the plan hereon (2 Roods 33.6 Perches) to be taken for Road from and after 14 March 1966 Registered 29 March 1966 at 2.50 pm

A.L.R.

332166 Lease to Wyoming Mineral Development Company Limited Term ... from 1.8.1968 with renewal clause — 24.9.1968 at 2.35 pm

A.L.R.

344116 Mortgage to General Nominees Limited 8.8.1969 at 11 am

DISCHARGED 30 JUN 1975 A.L.R.

A.L.R.

344117 Memorandum of Priority ranking Mortgage 344116 as a first Mortgage and Mortgage 274359 as a second Mortgage 8.8.1969 at 11 am

A.L.R.

369827 Mortgage to The State Advances Corporation of New Zealand 5.5.1971 at 11.20 am

DISCHARGED 12 SEP 1978 A.L.R.

A.L.R.

387825 Gazette Notice proclaiming as closed part of the road adjoining or passing through the within land — 26.6.1972 at 11.24 am

A.L.R.

426611 Mortgage to The State Advances Corporation of New Zealand 25.7.1974 at 9.24 am

DISCHARGED 12 SEP 1978 A.L.R.

A.L.R.

470131 Mortgage to The Rural Banking and Finance Corporation of New Zealand 7.5.1976 at 11.42 am

DISCHARGED 12 SEP 1978 A.L.R.

A.L.R.

503226/5 Transfer to Stacey Andrew Radford of Hawarden Farmer — 12.9.1978 at 12.04 pm

A.L.R.

503226/6 Mortgage to Bank of New South Wales Savings Bank (N.Z.) — 12.9.1978 at 12.04 pm

DISCHARGED MAY 1981

A.L.R.

503226/7 Mortgage to Vincent David Stancombe — 12.9.1978 at 12.04 pm

DISCHARGED

A.L.R.

512241 Mortgage to The Rural Banking and Finance Corporation of New Zealand — 7.3.1979 at ...

DISCHARGED

A.L.R.

A.L.R.

OVER.....

Amended version received 26/02/2018

C.T. 281/55

538672/4 Variation of Mortgage 503226/7 24.7.1980 at 12 noon

A.L.R.

554835/6 Transfer to Walter Reid Jackson of Dunedin Chartered Accountant- 26.5.1981 at 10.54am

A.L.R.

554835/7 Mortgage to Cook Allan & Co. Nominees Limited - 26.5.1981 at 10.54 am

DISCHARGED 17 MAR 1983

A.L.R.

A.L.R.

590531 Certificate under Section 221 of the Public Works Act 1981 22.2.1983 at 2.20 pm

DISCHARGED 21 NOV 1984

A.L.R.

591839/4 Mortgage to Cook Allan & Co Nominees Limited - 17.3.1983 at 10.09 am

A.L.R.

650786 Variation of Mortgage 591839/4 - 11.2.1986 at 9.46am

A.L.R.

676512 Transfer to Francis Basil Jackson of Otautau, Company Director, Roger Norman Macassey of Dunedin, Solicitor and Graeme James Marsh of Dunedin, Company Director - 9.4.1987 at 2:32 p.m.

A.L.R.

831796 Transfer being a grant of a right (in gross) to convey water over part herein shown marked 'EW' 'EX' 'EXI' on diagram annexed thereto together with incidental rights in favour of Arrow Irrigation Company Limited - 14.6.1993 at 10.46am

A.L.R.

COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952

Historical Search Copy

R.W. Muir
Registrar-General
of Land

Cancelled

Identifier	**OT281/55**
Land Registration District	**Otago**
Date Issued	12 January 1937

Prior References
OT47/179

Estate	Fee Simple
Area	39.4316 hectares more or less
Legal Description	Section 3, Section 4 and Section 60 Block VIII Shotover Survey District

Original Proprietors
Francis Basil Jackson, Roger Norman Macassey and Graeme James Marsh

Interests

298163 Gazette Notice declaring the part coloured red on the plan hereon (2 Roods 33.6 Perches) to be taken for Road from and after 14 March 1966 - 29.3.1966 at 2.50 pm

387825 Gazette Notice proclaiming as closed part of the road adjoining or passing through the within land - 26.6.1972 at 11.24 am

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

Type	Servient Tenement	Easement Area	Grantee	Statutory Restriction
Convey water	Section 3, Section 4 and Section 60 Block VIII Shotover Survey District - herein	EX Transfer 831796	Arrow Irrigation Company Limited	
Convey water	Section 3, Section 4 and Section 60 Block VIII Shotover Survey District - herein	EW Transfer 831796	Arrow Irrigation Company Limited	
Convey water	Section 3, Section 4 and Section 60 Block VIII Shotover Survey District - herein	EXI Transfer 831796	Arrow Irrigation Company Limited	

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

5401197.1 Transmission to Roger Norman Macassey and Graeme James Marsh - 13.11.2002 at 9:00 am

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

7157449.1 Transfer to Hogans Gully Farming Limited - 12.12.2006 at 9:00 am

Fencing Covenant in Transfer 7157449.1 - 12.12.2006 at 9:00 am

Land Covenant in Easement Instrument 7157449.3 - 12.12.2006 at 9:00 am

Land Covenant in Easement Instrument 7157449.4 - 12.12.2006 at 9:00 am

7164973.1 Mortgage to Roger Norman Macassey and Graeme James Marsh - 15.12.2006 at 9:00 am

7690740.1 Discharge of Mortgage 7164973.1 - 1.2.2008 at 9:45 am

8104256.1 Compensation Certificate pursuant to Section 19 Public Works Act 1981 - 18.3.2009 at 9:00 am

Identifier **OT281/55**

8944128.1 Gazette Notice (2011 pg 5472) declaring part herein shown as Section 1 SO 440817 (1462m2) to be road and vested in Her Majesty the Queen and CT 573582 issued for the balance - 15.12.2011 at 7:00 am

CANCELLED

Image Quality due to Condition of Original

[Land and Deeds—4.

[Form B.

281/55

NEW ZEALAND.

Reference: Vol. 47, Folio 179 (Sub)
Transfer No. 118891
Application No.
Order for N/C No.

Register-book, Vol. 281, folio 55

CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT.

This Certificate, dated the Twelfth day of January one thousand nine hundred and thirtyseven under the hand and seal of the District Land Registrar of the Land Registration District of OTAGO Witnesseth that CHARLES WOOD SWANN of Arrowtown, Farmer

is seised of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by memorial under written or endorsed hereon, subject also to any existing right of the Crown to take and lay off roads under the provisions of any Act of the General Assembly of New Zealand) in the land hereinafter described, as the same is delineated by the plan hereon bordered green, be the several admeasurements a little more or less, that is to say: All that parcel of land containing Ninetyseven (97) acres One (1) rood Thirty (30) perches more or less being Sections Three (3) Four (4) and Sixty (60) Block VIII SHOTOVER DISTRICT.

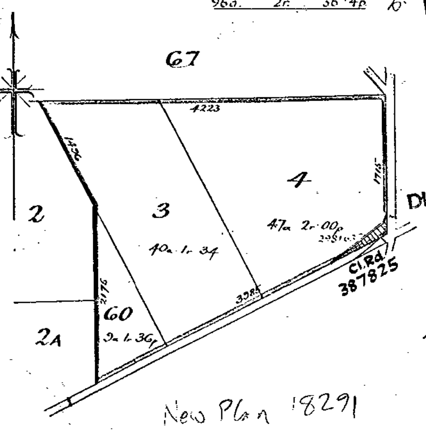
[signature]

Asst. ~~District~~ Land Registrar.

EQUIVALENT METRIC AREA IS 39.1442ha

Secs. 3,4+60 Blk VIII Shotover S.D.

Total Area: 97a 1r 30p



Scale, 10 chains to an inch

X.No.3432 Irrigation Agreement under The Public Works Act 1928 between His Majesty the King and Alice Jolly produced ... January 1934 at 10 o'clock — DISCHARGED

[signature] A.L.R.

Mortgage No. 97182 Charles Wood Swann to Alice Jolly produced 12th January 1937 at 2 o'c. — DISCHARGED

[signature] A.L.R.

Mortgage 97183 of Mortgage 97182 Alice Jolly to The Commercial Bank of Australia Limited produced 12th January 1937 at 2 o'c. — DISCHARGED

[signature] A.L.R.

X. No. 8120 ... under section 200 of the Public Works Act ... 3rd day of ... o'clock. — DISCHARGED

X 14521 Irrigation Agreement under Part XI Public Works Act 1924 between Her Majesty the Queen and Charles Wood Swann produced 1st November 1952 at 11.32 o'c — DISCHARGED 21 AUG 1965

[signature] A.L.R.

Transmission No. 36151 of Mortgage No. 97182 to The Public Trustee. Entered 14th May 1954 at 2.20 p.m.

[signature] A.L.R.

over

C.T. 281/55

281/55

Transfer 211498 Charles Wood Swann to Robert John Swann of Arrowtown Farmer produced 3rd December 1958 at 2.45

Mortgage 178596 Robert John Swann to The National Bank of New Zealand Limited produced 30th January 1959 at 2 o'c.

DISCHARGED

Mortgage 178634 Robert John Swann to Charles Wood Swann produced 3rd February 1959 at 2.40 o'c.

DISCHARGED

Variation of Mortgage 178634 produced 9th July 1959 at 2.45

DISCHARGED

244585 Transmission of Mortgage 178634 to Thomas Arthur Swann of Lowburn Orchardist as executor entered 6.4.1962 at 10.50

259453 Transfer being grant of right to take coloured stone from the within land for 3 years from 30th April 1962 Robert John Swann to J Fraser & Sons Limited 21/6/1963 at 10.41 am

274356 Surrender of rights granted by Transfer 259453 J Fraser & Sons Limited to Robert John Swann 21.7.1964 at 10.14 am

274357 Transfer to Vincent David Stancombe of Lake Hayes, Farmer 21.7.1964 at 10.21 am

274358 Mortgage to ... Limited 21.7.1964 at ...

DISCHARGED

274359 Mortgage to John Caldwell 21.7.1964 at ...

DISCHARGED 12 SEP 1978

289588 Compensation Certificate pursuant to section 17 of the Public Works Amendment Act 1948 – 12.8.1965 at 9.32 am

DISCHARGED

298163 Gazette Notice declaring the part coloured red on the plan hereon (2 Roods 33.6 Perches) to be taken for Road from and after 14 March 1966 Registered 29 March 1966 at 2.50 pm.

332166 Lease to Wyoming Mineral Development Company Limited Term ... from 1.8.1968 with renewal clause – 24.9.1968 at 2.35 pm

344446 Mortgage to ... Nominees Limited 8.8.1969 at ...

DISCHARGED 30 JUN 1975

344447 Memorandum of Priority ranking Mortgage 344446 as a first Mortgage and Mortgage 274359 as a second Mortgage 8.8.1969 at 11 am

369827 Mortgage to The State Advances Corporation of New Zealand 5.5.1970 at 11.20 am

DISCHARGED 12 SEP 1978

THIS REPRODUCTION (ON A REDUCED SCALE) CERTIFIED TO BE A TRUE COPY OF THE ORIGINAL REGISTER FOR THE PURPOSES OF SECTION 215A LAND TRANSFER ACT 1952.

A.L.R.

387825 Gazette Notice proclaiming as closed part of the road adjoining or passing through the within land – 26.6.1972 at 11.24 am

A.L.R.

426611 Mortgage to The State Advances Corporation of New Zealand – 25.7.1974 at 9.24 am

DISCHARGED 12 SEP 1978

A.L.R.

470131 Mortgage to The Rural Banking and Finance Corporation of New Zealand – 1976 at 11.42 am

DISCHARGED 12 SEP 1978

A.L.R.

503226/5 Transfer to Stacey Andrew Radford of Hawarden Farmer – 12.9.1978 at 12.04 pm

A.L.R.

503226/6 Mortgage to Bank of New South Wales Savings Bank (N.Z.) Limited – 12.9.1978 at 12.04 pm

DISCHARGED MAY 1981

A.L.R.

503226/7 Mortgage to Vincent David Stancombe – 12.9.1978 at 12.04 pm

DISCHARGED

A.L.R.

512241 Mortgage to The Rural Banking and Finance Corporation of New Zealand – 7.3.1979 at ... am

DISCHARGED

A.L.R.

OVER....

Amended version received 26/02/2018

C.T. 281/55

538672/4 Variation of Mortgage 503226/7 24.7.1980 at 12 noon

A.L.R.

554835/6 Transfer to Walter Reid Jackson of Dunedin Chartered Accountant - 26.5.1981 at 10.54 am

A.L.R.

554835/7 Mortgage to Cook Allen & Co. Nominees Limited - 26.5.1981 at 10.54 am

DISCHARGED 17 MAR 1983

A.L.R.

A.L.R.

590531 Certificate under Section 221 of the Public Works Act 1981 - 22.4.1983 at 2.20 pm

DISCHARGED 27 NOV 1985

A.L.R.

591839/4 Mortgage to Cook Allen & Co Nominees Limited - 17.3.1983 at 10.09 am

A.L.R.

650786 Variation of Mortgage 591839/4 - 11.2.1986 at 9.46am

A.L.R.

676512 Transfer to Francis Basil Jackson of Otautau, Company Director, Roger Norman Macassey of Dunedin, Solicitor and Graeme James Marsh of Dunedin, Company Director - 9.4.1987 at 2:32 p.m.

A.L.R.

831796 Transfer being a grant of a right (in gross) to convey water over part herein shown marked 'EW' 'EX' 'EXI' on diagram annexed thereto together with incidental rights in favour of Arrow Irrigation Company Limited - 14.6.1993 at 10.46am

A.L.R.

2313

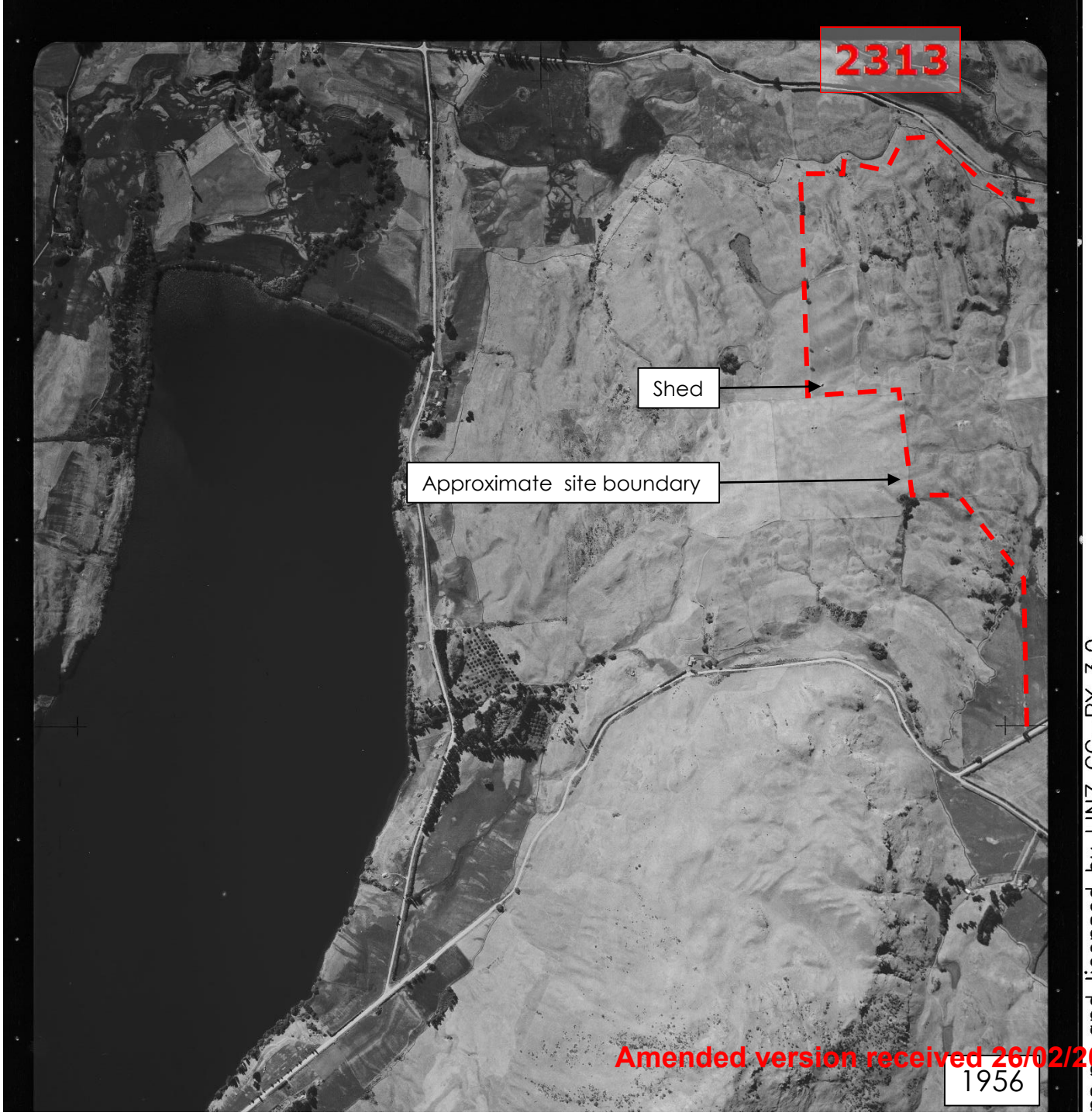
Appendix C:

Historical Aerial Photographs

Amended version received 26/02/2018

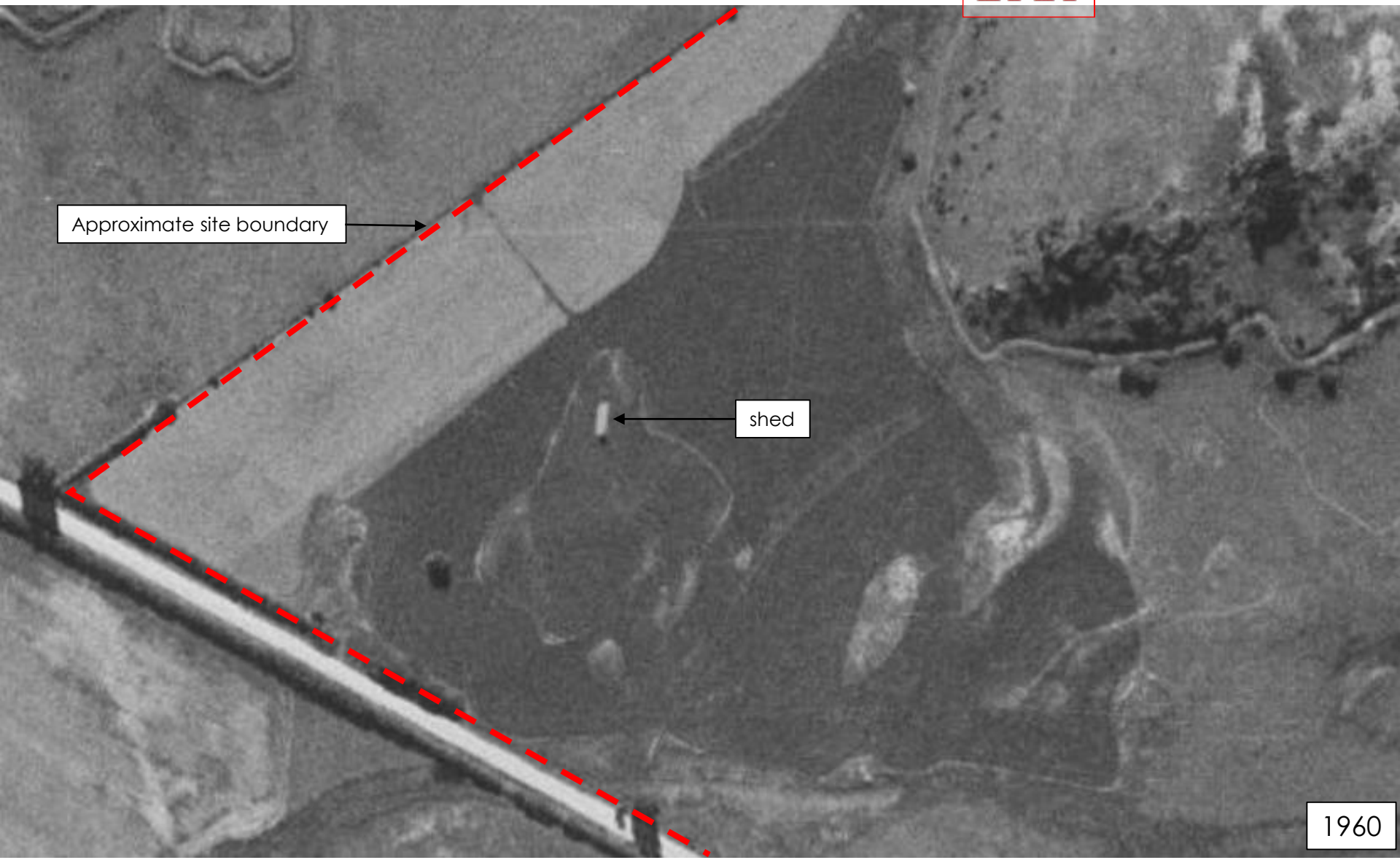
Amended version received 26/02/2018


2313
McDonnell Road
Sheds
Residential dwelling
Approximate site boundary
Amended version received 26/02/2018
1956



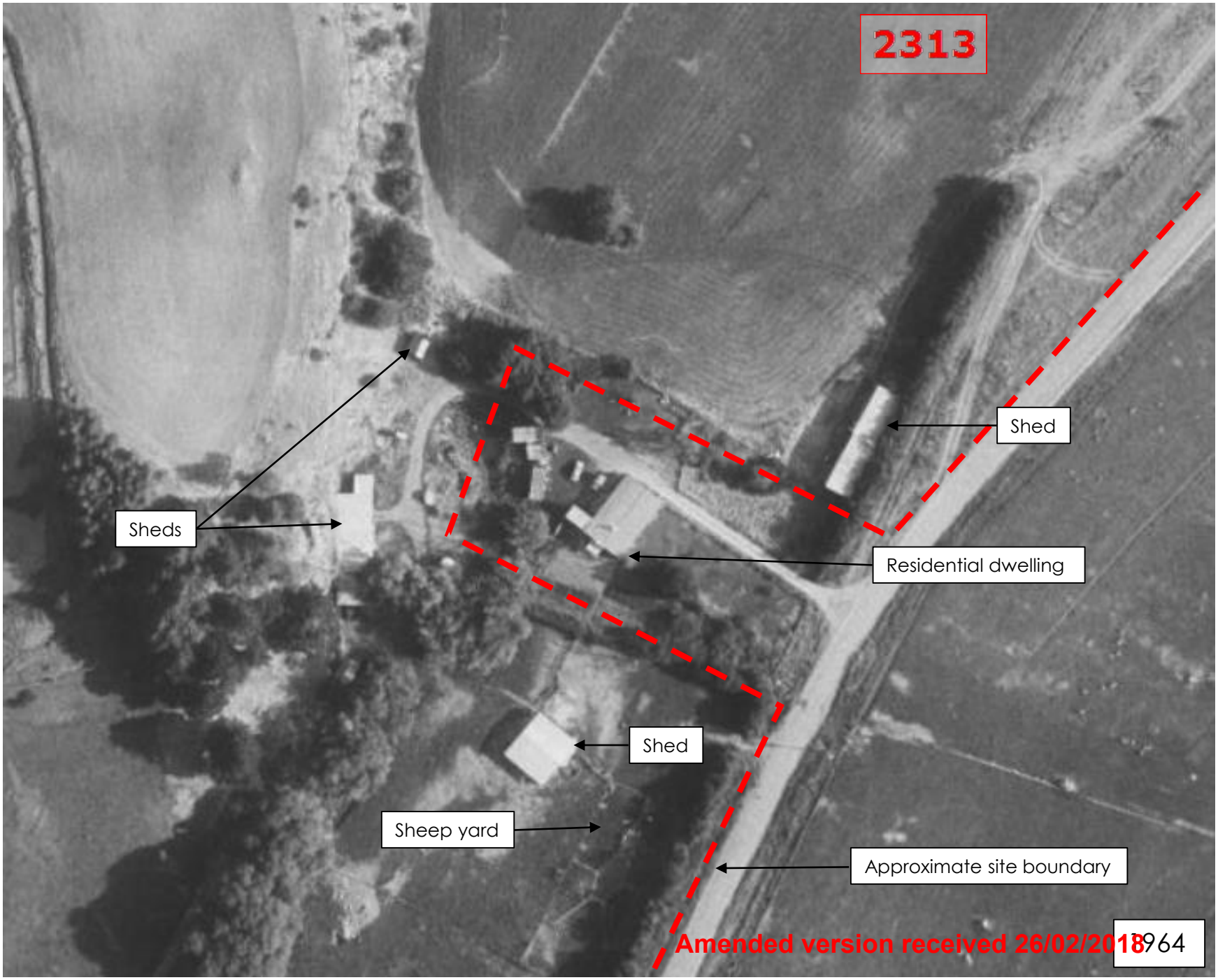
Amended version received 26/02/2018

2313

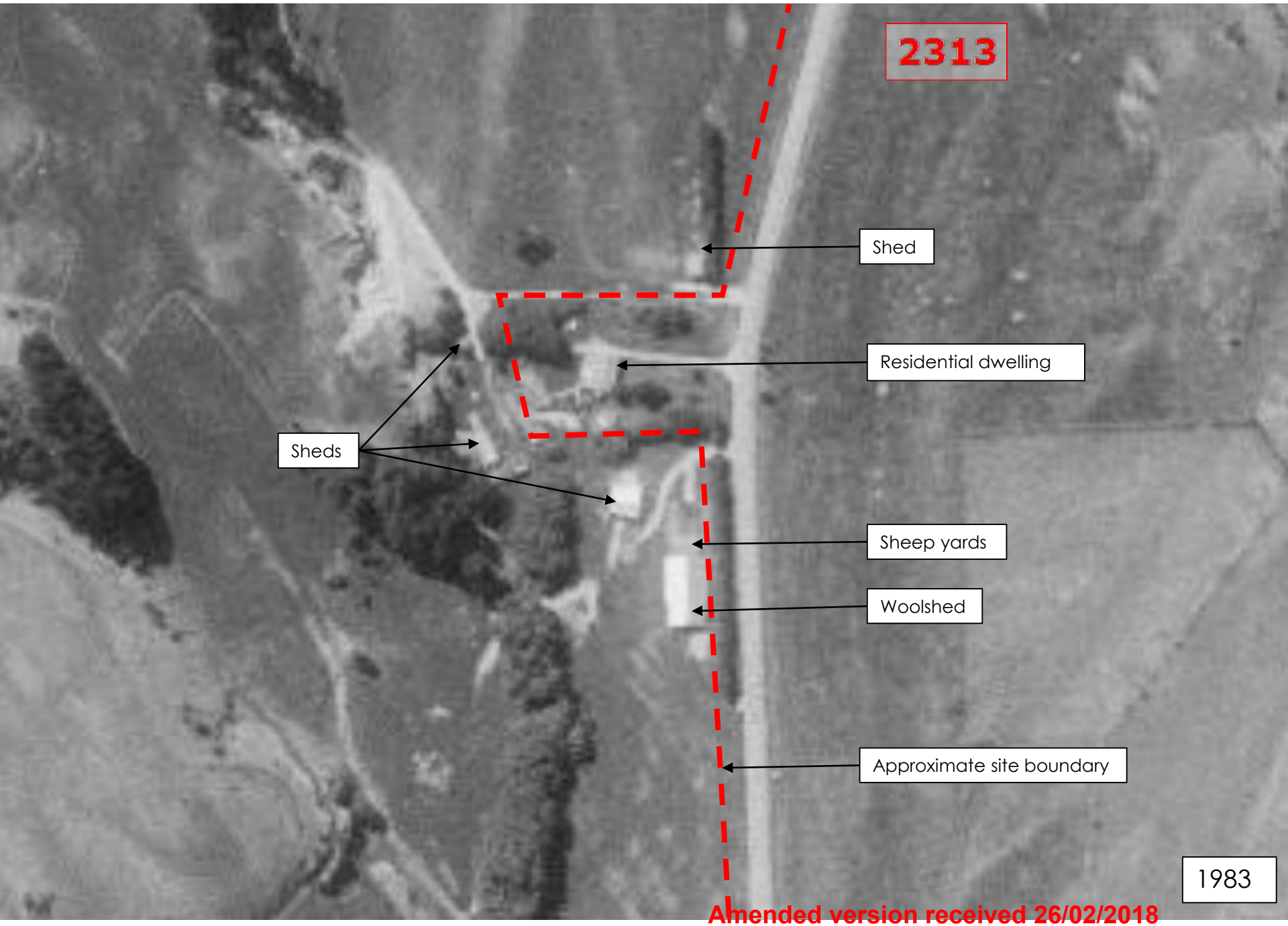


Amended version received 26/02/2018

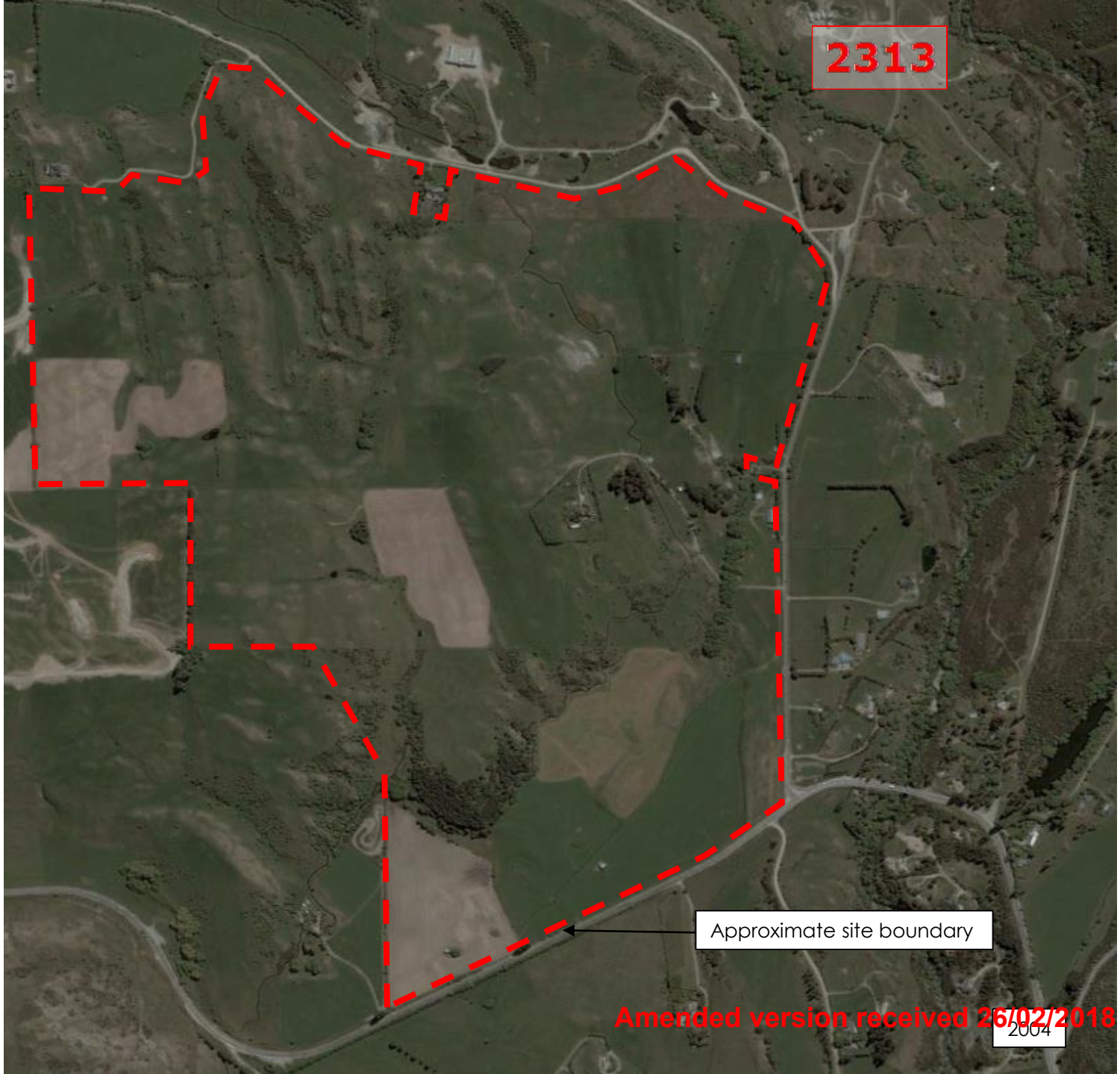

2313
Approximate site boundary
1964
Amended version received 26/02/2018
©Sourced from http://retrolens.nz and licensed by LINZ CC-BY 3.0


2313
Shed
Sheds
Residential dwelling
Shed
Sheep yard
Approximate site boundary
Amended version received 26/02/2018

Amended version received 26/02/2018



Amended version received 26/02/2018



Amended version received 26/02/2018

2313

Appendix D:

ORC Bore Search Map

Amended version received 26/02/2018

2313

Otago Regional Council

27 November 2017

Dear Duncan,

Thank you for your enquiry regarding information that the Otago Regional Council may hold regarding potential soil contamination at the properties indicated below:

Address	Valuation Number / Legal Description
-	29071/29907

The Otago Regional Council maintains a database of properties where information is held regarding current or past land-uses that have the potential to contaminated land. Land-uses that have the potential to contaminate land are outlined in the Ministry for the Environment's Hazardous Activities and Industries List (HAIL).

Where investigation has been completed, results have been compared to relevant soil guideline values. The database is continually under development, and should not be regarded as a complete record of all properties in Otago. The absence of available information does not necessarily mean that the property is uncontaminated; rather no information exists on the database. You may also wish to examine the property file at the relevant City or District Council to check if there is any evidence that activities occurring on the HAIL have taken place.

I can confirm that:

The above land does not currently appear on the database.

If your enquiry relates to a rural property, please note that many current and past activities undertaken on farms may not be listed on the database, as they can be more difficult to identify. Activities such as use, storage, formulation, and disposal of pesticides, offal pits, landfills, animal dips, and fuel tanks have the potential to contaminated land.

Similarly, the long-term use of lead-based paints on buildings can, in some cases, cases cause soil contamination. The use of lead-based paint is generally not recorded on the database.

Please feel free to contact me if you have any other enquires, or you would like to discuss the matter further,

Regards,

Simon Beardmore
Senior Environmental Officer

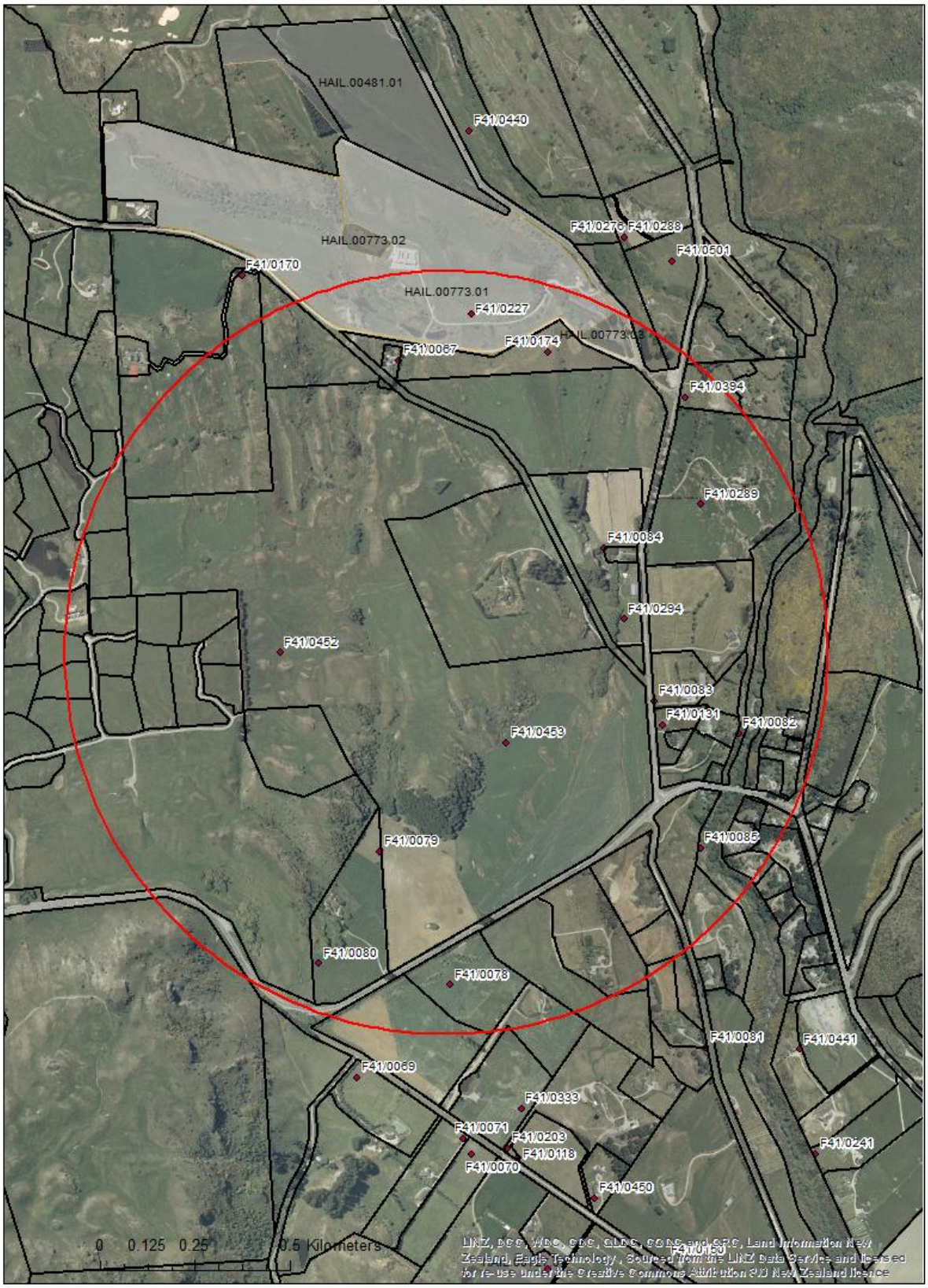
The enclosed/attached information is derived from the Otago Regional contaminated land register and is being disclosed to you pursuant to the Local Government Official Information and Meetings Act 1987. This information reflects the Otago Regional Council's current understanding of this site, which is based solely on the information obtained by the Council and held on record. It is disclosed only as a copy of those records and is not intended to provide a full, complete or entirely accurate assessment of the site. Accordingly, the Otago Regional Council is not in a position to warrant that the information is complete or without error and accepts no liability for any inaccuracy in, or omission from, this information. Any person receiving and using this information is bound by the provisions of the Privacy Act 1993.

Amended version received 26/02/2018

2313

Otago Regional Council

1 km Well Search



Amended version received 26/02/2018

2313

Appendix E:

XRF Readings

Amended version received 26/02/2018

2313

Latitude	Longitude	Sample ID	Arsenic	Latitude	Longitude	Sample ID	Arsenic
-44.9743	168.8364	HG1	12	-44.9696	168.8422	HG46	7
-44.9734	168.8360	HG2	10	-44.9695	168.8425	HG47	2
-44.9732	168.8379	HG3	10	-44.9698	168.8426	HG45	9
-44.9730	168.8375	HG4	10	-44.9699	168.8427	HG48	5
-44.9728	168.8373	HG5	7	-44.9701	168.8428	HG49	6
-44.9724	168.8373	HG6	9	-44.9709	168.8437	HG50	12
-44.9723	168.8368	HG7	9	-44.9707	168.8438	HG51	11
-44.9722	168.8364	HG8	11	-44.9705	168.8440	HG52	9
-44.9722	168.8377	HG9	9	-44.9703	168.8441	HG53	13
-44.9720	168.8372	HG10	8	-44.9701	168.8441	HG54	9
-44.9717	168.8365	HG11	11	-44.9700	168.8438	HG55	9
-44.9697	168.8331	HG12	8	-44.9698	168.8437	HG56	6
-44.9695	168.8327	HG13	9	-44.9681	168.8436	HG57	8
-44.9691	168.8337	HG14	8	-44.9678	168.8437	HG58	11
-44.9695	168.8338	HG15	11	-44.9676	168.8436	HG59	10
-44.9698	168.8339	HG16	4	-44.9674	168.8433	HG60	10
-44.9701	168.8340	HG17	7	-44.9678	168.8444	HG61	14
-44.9705	168.8344	HG18	6	-44.9675	168.8442	HG62	9
-44.9689	168.8363	HG19	13	-44.9675	168.8447	HG63	14
-44.9690	168.8364	HG20	14	-44.9713	168.8448	HG64	13
-44.9692	168.8365	HG21	14	-44.9714	168.8451	HG65	9
-44.9698	168.8365	HG22	9	-44.9712	168.8452	HG66	10
-44.9699	168.8365	HG23	13	-44.9691	168.8452	HG67	18
-44.9701	168.8366	HG24	9	-44.9689	168.8451	HG68	12
-44.9703	168.8366	HG25	7	-44.9686	168.8450	HG69	14
-44.9705	168.8366	HG26	12	-44.9683	168.8450	HG70	13
-44.9715	168.8385	HG27	3	-44.9685	168.8443	HG71	14
-44.9713	168.8385	HG28	8	-44.9688	168.8443	HG72	13
-44.9711	168.8386	HG29	6	-44.9691	168.8444	HG73	9
-44.9709	168.8385	HG30	12	-44.9693	168.8447	HG75	9
-44.9706	168.8384	HG31	13	-44.9727	168.8450	HG76	13
-44.9698	168.8405	HG32	9	-44.9730	168.8449	HG77	7
-44.9691	168.8404	HG33	14	-44.9733	168.8448	HG78	8
-44.9691	168.8411	HG34	12	-44.9734	168.8451	HG79	10
-44.9715	168.8415	HG35	8	-44.9690	168.8470	HG80	14
-44.9712	168.8414	HG36	9	-44.9687	168.8471	HG81	20
-44.9707	168.8413	HG37	9	-44.9713	168.8425	HG82	9
-44.9715	168.8419	HG38	9	-44.9710	168.8422	HG83	6
-44.9712	168.8418	HG39	9	-44.9708	168.8420	HG84	6
-44.9709	168.8416	HG40	7	-44.9707	168.8425	HG85	10
-44.9706	168.8417	HG41	8	-44.9705	168.8424	HG86	9
-44.9702	168.8418	HG42	8	-44.9703	168.8421	HG87	8
-44.9700	168.8419	HG43	10	-44.9715	168.8415	HG88	14
-44.9698	168.8420	HG44	9				

Amended version received 26/02/2018

2313

Hrlmesconsultinggroup

REPORT

STRUCTURAL AND CIVIL ENGINEERS

HOGANS GULLY INFRASTRUCTURE

PREPARED FOR

HOGAN GULLY FARMING LTD

114166.00

OCTOBER 2015

Amended version received 26/02/2018

2313

HOGANS GULLY INFRASTRUCTURE REPORT

Prepared For:
HOGAN GULLY FARMING LTD

Date: October 2015
Project No: 114166.00
Revision No: 1

Prepared By:

Sarah Duncan
PROJECT ENGINEER

Reviewed By:

Andrea Jarvis
PROJECT DIRECTOR

Holmes Consulting Group LP
Queenstown Office

Amended version received 26/02/2018

Amended version received 26/02/2018

REPORT ISSUE REGISTER

DATE	REV. NO.	REASON FOR ISSUE
October '15	1	Draft for comment

CONTENTS

Holmes Consulting Group have been engaged by Hogan Gully Farming Ltd to investigate the feasibility of providing infrastructure to support the proposed Hogans Gully development.

1.1 SITE DESCRIPTION

The proposed development is located between Hogans Gully Road, McDonnell Road and State Highway 6, at Arrow Junction. It is bordered to the west by the Bendemeer subdivision.

The site is rural in character, and is currently grazed. Municipal water, wastewater and stormwater infrastructure does not extend to the site. The rural character of the site is reflected in the design philosophies described in this report; the development itself, and all the infrastructure to support it, is intended to be as low impact as possible. This low impact design philosophy looks at the impacts outside the site as well as within the site; by taking a holistic approach we avoid simply moving a problem somewhere else.

1.2 SCOPE OF WORK

The scope of work for this project included the following:-

- Determine the infrastructure demands associated with the proposed development.
- Assess feasibility and options for servicing the development.

1.3 DEVELOPMENT SCALE

It is intended that the development will be made up of 50 new residential lots.

1.4 LIMITATIONS

Findings presented as a part of this project are for the sole use of Hogan Gully Farming Ltd, Brown and Company Planning Group, Baxter Design Group and Queenstown Lakes District Council (QLDC) in their evaluation of the subject property. The findings are not intended for use by other parties, and may not contain sufficient information for the purposes of other parties or other uses.

Our professional services are performed using a degree of care and skill normally exercised, under similar circumstances, by reputable consultants practicing in this field at this time. No other warranty, expressed or implied, is made as to the professional advice presented in this report.

2.1 WASTEWATER OPTIONS

Wastewater options broadly exist on a continuum, ranging from connection to a municipal treatment plant through to individual on-site wastewater treatment and disposal systems for each site or facility that generates wastewater. These options provide not only different ways to dispose of wastewater, but also different ways of thinking about wastewater.

Connection to a local municipal system via either a conventional or small bore sewer network is convenient, and with larger populations, economies of scale let us treat and dispose of wastewater efficiently. Individual on-site systems keep the wastewater within the site it was generated on, with treatment typically via a septic tank or secondary treatment plant. Community treatment plants lie between these two extremes, with either a conventional or small bore sewer network feeding to a central treatment plant prior to land application of wastewater within common land located within the bounds of the wider site.

Connection to the Queenstown wastewater treatment plant (Shotover Treatment Plant) has potential adverse environmental effects. These include the following:

- The sewer line running along State Highway 6 to the Shotover Ponds ("Bendemeer Line") is close to capacity, and any significant additional flows are likely to require upgrades, involving excavation close to the State Highway for a length of approximately 8 km and possible disruption to those who are currently connecting to this pipe.

- The wastewater from the current ponds and the future ("Project Shotover") treatment plant is discharged (currently directly, in the future indirectly) into the Shotover River.

Both on-site and community treatment plants have the benefit of allowing the wastewater generated on the site to be considered a resource to be used instead of a waste product to be disposed of. The treated wastewater can be used as sub-surface irrigation for common areas, including the proposed ecological planting – by using the wastewater as a resource for this ecological enhancement, it can help to improve the environment, and help to make the ecological planting more viable.

Small bore sewer networks expand on these low impact design philosophies by using smaller pipes which can be run at varying grades and do not require straight pipes and manholes. By following the ground contours, we can therefore also minimise the earthworks required.

2.2 WASTEWATER GENERATED

Wastewater will be produced from each of the proposed residential sites, with flows varying depending upon the size of dwelling on each site.

For residential dwellings with a reticulated or bore-water supply, AS/NZS1547:2012 states a typical design flow allowance of 200 l/person/day (Table H3). For a 50 lot development, and assuming an average occupancy of 3.5 persons per lot, the wastewater potentially generated on the site will be 35,000 l/day.

2.3 THE BEST OPTION FOR THIS SITE

The best option for the wastewater solution for this site needs to take into consideration the site as a whole. The low impact philosophy for the site is being applied to every aspect of design. By designing the roads to minimise the earthworks required their curves will likely align with the natural contours of the land. This means that traditional "big pipe" solutions needing straight lines pipe runs and manholes at each bend don't work as well, and drives us towards a small bore sewer solution, or on-site treatment and disposal. A small bore sewer solution could be in the form of a Septic Tank Effluent Pumping (STEP) network, which provides septic tanks on each lot and allows for only the primary treated wastewater to be pumped to a central treatment plant location, or a grinder pump network which also provides a tank on each lot, but pumps macerated wastewater, including solids, through to a central treatment plant location. By effectively stockpiling the wastewater in one central location in this manner it opens the possiblity for re-use of the treated effluent as irrigationw ater on-site. In comparison, although having dwellling specific on-site treatment and disposal removes the need for any piped infrastructure outside of the lot boundaries, the opportunity to reuse the treated wastewater as a resource to support ecological planting is lost.

For all of these reasons, we believe the best option for this site would be a small bore sewer system feeding to a single treatment plant able to treat all of the wastewater from the whole development. This lets us use the wastewater as a resource and helps us to integrate the infrastructure with the ecology and provide benefits to the environment.

To use the wastewater to irrigate the ecological planting, we need to use drip irrigation lines. This means we need to ensure that the raw effluent is treated to a secondary treatment level (as described in NZS1547:2012) or better so that the lines don't clog up. In addition, nitrogen in the treated wastewater needs to be kept to 30 mg/L or less so that we don't introduce more nitrogen to the environment than the planting and soil bacteria can absorb. We will also need to bury the drip lines or cover them with 300 mm of mulch to prevent the lines freezing in winter.

Treatment plants that can achieve these standards include packed bed reactors (PBR), membrane bioreactors (MBR), submerged aerated filtration (SAF) plants and sequencing batch reactors (SBRs). Of these, the packed bed reactor provides the most passive treatment option (requiring the least amount of energy and operator input), and also handles periods of low flow (as expected in the initial stages of any development) and peak flows (as may be experienced on weekends or during holiday influxes) the best.

2.4 LAND APPLICATION AREA

The soils on this site are loamy gravels over the top of rock. The soils have good properties for on-site wastewater, with enough water holding capacity to slow down the passage of water through to the underlying rock and eventually groundwater, but enough permeability to mean the treated wastewater won't pond near the surface. The soils are described as category 3-4 soils in AS/NZS1547:2012, which recommends irrigation rates of 3.5 mm/day for these soils. This means 3.5 litres of treated wastewater will be applied to each square metre of soil each day, when the peak wastewater amount is generated.

Because the site has good sun, and the treated wastewater is being used to support planting areas, 3.5 mm/day is a conservative and sustainable discharge rate. Based on the 35,000 litres/day of wastewater being generated, this means we need an area of 10,000 m^2 for the land application area. If the ecological planting covers this full area, it may be possible to use some of the land application pipework as irrigation pipework in the short to medium term until wastewater volumes increase enough to support the planting without supplementary irrigation.
.

3.1 STORMWATER OPTIONS

Similarly to the wastewater, stormwater solutions range from "big pipe" solutions to low impact design solutions.

Piped stormwater solutions are designed to take the surface water run off away from built up areas as quickly as possible, before discharging into either water courses or other infrastructure that eventually drains into water courses. Treatment is usually provided as far away from the source as possible, and structures and devices to slow the discharge down, such as rock rip rap, baffle walls and headwall structures are then used to prevent erosion of the water course as the stormwater enters it.

Low Impact Design (LID) stormwater solutions concentrate on natural solutions and working with the landscape to treat stormwater close to its source and then, where possible, either use the stormwater as a resource or discharge it in a way that has the least impact possible on the environment. This discharge can be via soakage to ground, through creation of ponds and enhanced wetland areas or similar solutions. The intended end result with an LID solution is for the stormwater to be discharged to the environment at the same rate and with the same or better quality water as would have occurred without the development taking place. In contrast to piped solutions, LID solutions usually focus on slowing the water down, giving the natural environment time to treat and store the water prior to discharge.

In urban settings, piped solutions are often required due to the amount of space required for LID solutions. Ponds, wetlands and grassed swales all require space that is often unavailable in built up areas. However, in rural residential settings, where the development density is significantly lower, the amount of space required for LID solutions is no longer prohibitive.

3.2 SOURCES AND CHARACTERISTICS OF STORMWATER

For this development, the potential sources of stormwater are:

- Roof water from buildings and associated decks and footpaths
- Road run off from the internal roads
- Run off from car parking areas on lots

These sources of runoff have the potential to introduce various contaminants into the stormwater, some of which require treatment. These include:

- Sediment-laden run off from construction activities

- Low level sedimentation from roads (tracked on vehicles or introduced as winter grit)
- Hydrocarbons from roads and parking areas
- Low levels of pathogens from bird and animal droppings on roofs and other hard surfaces
- Low levels of potentially toxic organic and inorganic material originating from gardening and agricultural land use
- Litter, expected to be at very low levels in this type of development

The best way to treat the majority of potential contaminants is to deal with them as close to the source as possible, or avoid them entering the stormwater network in the first place. For some of the pollution sources, there are obvious ways to deal with them. For example, sediment laden run off from construction activities can be handled by normal construction methodologies such as silt fences and bunds, or for certain larger sites, sediment detention ponds. The majority of the other contaminants can be readily removed using natural systems such as grassed swales adjacent to roads, constructed or enhanced wetlands and ponds.

3.3 THE BEST OPTIONS FOR THIS SITE

As mentioned above, the philosophy for the stormwater for this site, as with the rest of the infrastructure, is low impact design.

Roading networks are to be handled via grassed swale networks, similar to what is seen at Jacks Point. Concrete kerb and channel networks as seen in typical urban environments are considered inappropriate in this rural setting.

Shallow ponds and wetlands already exist in the low land areas of this site, and stormwater run off generated within the site can be used as a resource to enhance these areas. Combined with the wastewater solution, which provides nutrients and irrigation water to the "dry" planting areas, the stormwater run off can be used to enhance the wetland planting intended for the site. By using both the stormwater and treated wastewater as a resource, the ecological planting becomes more viable and less expensive to maintain, and corridors of native planting throughout the site to encourage bird life become a reality.

LID stormwater solutions also concentrate on minimising the run off generated in the first place. For this site, permeable paving in car parking and driveway areas is recommended. By using products such as Natural Paving (with a plastic honeycomb mesh to provide strength, that is infilled with gravel), run off from these areas can be minimised. Grassed swales to collect road run off can be shaped to slow stormwater down, allowing for both treatment and storage of stormwater before its eventual discharge to the wetland and pond areas described above.

Roof water collection from houses for re-use within the dwelling in on-site tanks, with overflow volumes being disposed of to ground can also minimise the amount of stormwater entering the wider network, and is also recommended for this site.

4.1 WATER SUPPLY OPTIONS

Water supply options for developments within the Queenstown Lakes District include both district schemes operated by QLDC and independent (private) water supply schemes.

Private water supply schemes, obviously, require a source of water, adequate storage, and treatment to meet drinking water standards. The level of treatment needed depends on the water source and the possibility for contamination of that water. Surface water in areas where humans or animals are present require the highest levels of treatment, whilst secure groundwater sources generally require the least amount of treatment.

The Lake Hayes water scheme boundary services the Bendemeer subdivision, which borders the Hogans Gully site. Although from a pressure point of view, it is possible the Lake Hayes Scheme could be extended to service the development, the scheme is already over-subscribed and subject to water restrictions throughout the summer months.

The Hogans Gully site is located above the Wakatipu Basin Aquifer, indicating groundwater availability. Discussions with local contractors has indicated that groundwater is readily available on the lower terraces of the site, with groundwater flows heading from Lake Hayes towards Arrow Junction and on towards the Arrow River.

Surface water sources within the site have lower reliability, reducing significantly in flows during summer months.

Irrigation water is another key consideration, especially if landscaping and aesthetic plantings are to be developed. The Arrow Irrigation Race passes through the north eastern corner of the site, providing a source of irrigation water during summer months.

The development will also require a fire fighting water supply. This can be provided via a reticulated network from a central reservoir feeding fire hydrants or via static water supplies adjacent to each building.

4.2 WATER DEMAND

As per the wastewater, a potable water supply is required for all of the elements on the site.

Water demand for developments within the Queenstown Lakes District are usually based on QLDC's amendments to NZS4404:2010. The residential water demands are high by national standards, and include generous irrigation demands. For this project, with the potential for irrigation water for common areas and landscaping to come from the Arrow Irrigation Race (supplemented by reuse of both stormwater and wastewater) the residential water demands are expected to be much lower than usual. We have therefore assumed water use of 350 litres/person/day for each of the residential lots. Assuming an average of 3.5 persons per residential lot, this means a total residential design flow of 61,250 L/day.

4.3 THE BEST OPTION FOR THIS SITE

Due to the supply restrictions within the Lake Hayes Water Scheme, a stand-alone water supply is considered the best option for this site. Groundwater sources are readily available within the wider site, and the water quality and reliability benefits over a surface water source make groundwater a better option.

The most readily available groundwater source on the site is on the edges of the lower terrace adjacent to the State Highway. From this location, pumps will be required to supply water up to the residential lots.

The upper reaches of the site are at an approximate level of 468 m above sea level. The highest building platforms are around 445 m above sea level. This elevation difference of approximately 20 m is not enough to ensure both good water pressure within the houses and adequate fire flows and pressures without the use of a booster pump station. It is therefore recommended that water supply tanks on each lot (buried or above ground) with small pressure pumps are used to provide the potable supply. These water tanks will also be able to provide the fire flows necessary. The water reticulation network will provide a trickle feed to these tanks on a demand basis.

The Arrow Irrigation Company have confirmed that irrigation water is able to be supplied for the communal areas.

5.1 INFRASTRUCTURE OPTIONS

The residential dwellings will require telecommunications and power supplies, and may require gas facilities.

Telecommunications can be provided by either mobile or hard-wired infrastructure. Whilst improvements in mobile technology continue, hard-wired infrastructure continues to provide better reliability and speed. Telecommunications infrastructure surrounds the site.

Power infrastructure similarly surrounds the site, and a connection to the national grid is essential to provide a reliable electricity supply. However, on-site small scale generation in the form of solar panels on roofs provides sustainability benefits.

Piped gas infrastructure is not currently located in the immediate surrounds, and any gas use on site will either require individual gas bottle supplies for each dwelling, or a central tank farm with piped infrastructure to each lot.

5.2 THE BEST OPTIONS FOR THIS SITE

Extending the existing telecommunications network to supply each residential lot with a hard-wired connection is a given need for this site. Chorus's Telecom Subdivision Group have confirmed the existing network has capacity to support this development, subject to upgrades to cabinetry.

Power suppliers have also been contacted, and although new switch gear and transformers will be required, the existing electricity network can support the development. The low impact design philosophy we have already described also supports the use of solar panels on the roofs of the dwellings if desired.

Piped gas from a central tank farm will require the same amount of gas storage as individual gas bottles, but increase the amount of infrastructure due to the pipework required. The best way of supporting the development is therefore individual gas bottle supplies for each dwelling that needs or wants gas.

6.1 LOW IMPACT DESIGN

As per the rest of the development, the low impact design philosophy flows through to earthworks and roading.

Although the detailed design of the roads and building platforms has not been undertaken at this stage, the proposed masterplan has been developed by carefully considering the work required to construct this essential infrastructure. Roads therefore follow the contours of the site wherever possible to reduce the amount of earth we need to move to form these access ways. Residential zones have been chosen based on where building platforms can be both constructed and accessed with the minimum environmental impact.

6.2 ROAD SURFACING

Low impact design asks us to consider not just the initial construction of any aspect of the development, but also the resources required for future maintenance. Although a number of rural roads in this area remain unsealed, with the final surface left as compacted gravel, the dust generated and the amount of maintenance required means unsealed roads have a reasonably high impact on the environment.

The internal roads will therefore be formed with either a chip seal or asphalt surface, and with walking tracks and footpaths to encourage pedestrian circulation.

As discussed in the stormwater section above, concrete kerb and channel isn't considered appropriate for this development, with grassed swales to be used instead

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Geotechnical Report for Resource Consent

Hogans Gully Farm,

McDonnell Road, Wakatipu

Report prepared for:

Hogans Gully Farm

Report prepared by:

GeoSolve Limited

Distribution:

Hogans Gully Farm

GeoSolve Limited (File)

December 2017

GeoSolve Ref: 170929

GEOTECHNICAL WATER RESOURCES PAVEMENTS

Amended version received 26/02/2018

Table of Contents

1 Introduction

1.1 General

This report presents the results of a geotechnical assessment undertaken by Geosolve Ltd to provide comment on the geological hazards, subsoil conditions and geotechnical issues expected to be present at the proposed Hogans Gully Farm development, McDonnell Road, Wakatipu.

This report has been completed in accordance with the terms and conditions outlined in Geosolve proposal reference 170929, dated 20 November 2017.

The aim of this report is to provide a preliminary geotechnical assessment of the proposed development areas to support a Resource Consent Application. It is expected further investigations and engineering assessment will be required during the detailed design stage of the project.

1.2 Development

Plans provided to Geosolve indicate the proposed development will comprise an 18 hole golf course with associated clubhouse, maintenance compound, access roads driving range facility and irrigation pond. In addition to the golf infrastructure approximately 84 residential building platforms are proposed. The residential platforms will be grouped in pockets across the development area.

Significant cut and fill earthworks are proposed to accommodate the development. A plan, completed by Clarke Fortune McDonald & Associated (CFMA), is provide in Appendix A and shown the proposed extend of the cut and fill earthworks. Maximum cut depth of 9.6 m and maximum fill depths of 5 m are proposed.

Plans of the development are provided in Appendix A.

1.3 Site Description

1.4 General

The site location is approximately 2 km to the south of Arrowtown, see Figure 1.1 below. The development is located between Hogans Gully Road, present along the northern boundary, McDonnell Road to the east, The Gibbston Highway (SH6), to the south and the Bendemeer residential area to the west.

The area largely comprises undeveloped farmland with associated access tracks and irrigation. A functioning water race is present in eastern areas if the site. Undeveloped land and several widely dispersed residential buildings are present close to the development site boundaries

Figure 1.1 – Site location plan

1.5 Topography and Surface Drainage

The site covers an area of low undulating hills and hummocky ground in the eastern area of the Wakatipu Basin. Topographically the area ranges in height from approximate RL 440 m to RL 380 m. Photographs 1 and 2 below show general views of the site topography.

In the north western area the landscape comprises many low steeply sloping ridgelines and hummocks 10-30 m in height. Low lying areas between the hummocks were observed to be wet/marshy in several locations. This area typically drains to the north, however a water race/irrigation trench diverts a portion of the flow through the eastern area of the site and to the south. The water race follows the slope contour and was noted to have a high water flow during the site inspection. No significant indications of instability of the water race were observed close to development locations.

There are numerous ephemeral gullies within the development area. Most of these were dry during inspection and have limited catchment areas. Some had very light flows and swampy areas were identified.

2 low volume storage ponds are located in the north of the site. A dam, approximately 2 m in height has been constructed in 1 location.

2 areas of schist quarrying were identified, typically being low in height.

General site contours are provided on the site plans, Appendix A.

Photograph 1. Hummocky ground in the north western area of the site.

Photograph 2. Low rolling hills in the south eastern area of the site.

2 Expected Subsurface Conditions

2.1 Geological Setting

The site is located in the Wakatipu Basin, a feature formed predominantly by glacial advances, the last of which occurred approximately 10,000-20,000 years ago. The glaciation scoured the schist bedrock and left extensive deposits of till, outwash gravels and lake sediments. Post glacial times have been dominated by erosion of both the schist bedrock and overlying sediments and by localised deposition of alluvial deposits by rivers and streams.

No active fault traces are known in the vicinity of the site, however, a significant seismic risk exists in the region from potentially strong ground shaking associated with rupture of the Alpine Fault located on the west coast of the south Island. There is a high probability that an earthquake with a magnitude of 7.5 to 8 will occur along the Alpine Fault within the next 50 years.

2.2 Stratigraphy

The regional geological map IGNS Map 18, Wakatipu, 1:250,000 scale, indicates the site geology comprises Q2t and Q4t Glacial Till, underlain by Schist bedrock. Schist bedrock is shown at the surface in many areas if the site.

No specific intrusive investigations have been completed for the purposes of this report. Generalised stratigraphy is provided based on geological exposures observed during the site inspection. Soils directly observed on site comprised:

- Localised uncontrolled fill associated with farm access construction;
- Thin surface deposits of Loess comprising silt and fine sand;
- Swamp/organic deposits at the base of gullies and in low lying deposits;
- Glacial outwash, sands and gravels;
- Glacial till;
- Schist bedrock, psammitic and pelitic in composition. The foliation is persistent across the whole site area, dipping to the south west.

2.3 Groundwater

ORC well data for the site and surrounding areas has been reviewed. Depth to groundwater shows significant variation from less than 1 m to approximately 20 m, and is expected to be locally influenced by the site topography. The deeper well data is expected to reflect the regional groundwater table level.

Shallow perched groundwater is expected to be present in low lying areas, dips and hollows, typically perched on impermeable schist and glacial till materials.

The entire site is present above the Wakatipu Basin Aquifer and consents will be required to undertake any drilling, boring or other activity which could adversely affect groundwater.

3 Natural Hazards

3.1 Seismic

A significant seismic risk is present across the region, as discussed in Section 2.1 above.

3.2 Slope Stability

The following comments are provided with respect to slope instability:

- No deep seated, recent or active slope instability of the soil or slopes was observed during the site walkover, and no known risks are shown on the Queenstown Lakes District Council (QLDC) GIS mapping. The schist foliation is consistent across the site.
- Small scale rock fall associated with localised weathering and gradual fretting of the rock was observed from the bluffs in some location. See photograph 3 below.
- Glacial erratic boulders (5 m and 8 m in diameter) are present in the north western area, see Figure 1c, Appendix A, and Photograph 4 below. The 8 m diameter boulder is located on a low ridge and has a notable overhang caused by erosion of the underlying slope. There is a low risk of instability/rock roll should this boulder be subject to strong ground shaking, however, no development is proposed downslope of the boulder.

Photograph 3. Local small scale recent rock fall from a schist bluff.

Photograph 4. Glacial erratic boulder a low ridge in the northern area of the site, overhanging on the western side.

3.3 Liquefaction

On the QLDC hazard mapping the site is unclassified with respect to liquefaction, indicating no specific assessment of the area has been completed. Based on a review of the site mapping information and other available subsurface data the risk of liquefaction is expected to be nil to low for most of the site and the individual development areas. This opinion is based on the shallow depth to rock and glacial till, which are exposed at the surface in many locations and not prone to liquefy, the generally elevated locations of the development areas, and the depth of the regional groundwater table.

It is possible that very localised liquefaction may occur in some of the low lying marshy gullies and hollows however this is unlikely to have a significant negative impact on the proposed development.

3.4 Alluvial Fan

No alluvial fan hazards are noted on the QLDC hazard mapping and none were identified during the site inspection.

Localised storm water run-off, typical of sloping hillside environments, should be expected during periods of heavy rainfall.

4 Preliminary Engineering Considerations

4.1 General

The recommendations and opinions contained in this report are based upon ground investigation data obtained at discrete locations and historical information held on the GeoSolve database. The nature and continuity of subsoil conditions away from the investigation locations is inferred and cannot be guaranteed.

The level of assessment provided is considered suitable for Resource consent. Further investigation and assessment will be required to support the detailed design stage.

4.2 Excavations

Excavation of up to 9.6 m in depth area proposed. In general excavations are readily achievable in the identified geological materials using standard plant, e.g. rock breakers, rippers and excavators. Rock excavation and can be facilitated by pre-splitting if required. Standard geotechnical engineering assessment, design and monitoring practices are available to control risks associated with the proposed excavations.

The schist foliation, a persistent weak defect in the rock mass, slopes to the south west across the site. Instability of cuts in schist that face south west may develop along this defect and should be assessed on a case by case basis.

Re-grading slope batters to shallower angles or utilising standard engineering options to support cut slopes are frequently used to provide long term stability of cuts in the identified soil and rock materials.

4.3 Engineered Fill

Maximum fill depths of 5.0 m are proposed and engineered fill will be placed beneath building footprint areas. All fill utilised as bearing for foundations should be placed and compacted in accordance with NZS 4431:1989 and certification provided to that effect. Fill batter slope angles, factors and safety against slope failure and building set-back or construction requirements should be considered during the detailed design phase.

4.4 Construction near Slope Crests

Several development zones are located close to the crests of moderately steep slopes.

Site observations indicate most of these locations are likely to have schist bedrock at shallow depths, although thin glacial till and outwash soils will also be present in some areas. Engineered fill may be present in some locations.

Further geotechnical investigation and assessment will be required to confirm any building or lot specific engineering requirements as part of the detailed design phase. Slope stability analysis may be required in some cases. If lower than ideal factors of safety are identified then appropriate options to address the issue are specific foundation design, ground improvement, e.g. reinforced earth slopes, or building set-backs.

4.5 Foundations

Most development areas will in areas of glacial outwash, glacial till and schist bedrock. These materials are generally suitable for shallow foundations provided an appropriate bearing capacity is determined prior to support design and all unsuitable materials are stripped from building footprint areas.

Loess and uncontrolled fill are likely to be unsuitable as foundation subgrade and should be identified and addressed appropriately during design and construction.

Foundations on engineered fill are likely to provide 'Good ground' in accordance with NZS3604, provided the proximity of sloping ground and the strength of the underlying ground has been considered.

4.6 Groundwater Issues

No significant issues are expected with respect to groundwater. The development proposal typically avoids building construction in low lying areas identified as wet/marshy.

As discussed in Section 2.3 the Wakatipu Basin Aquifer underlies the site and consents will be required if drilling, boring or other impact on the aquifer is required.

4.7 Water Race

It is unlikely the water races will have been constructed to modern geotechnical standards, however, this feature is several decades in age and is likely to have reached some level of equilibrium during typical daily conditions, low magnitude seismic and rainfall events. The stability of the earthworks may be marginal in some areas and future slope movement/blockage of the channel may be a risk, particularly during a large seismic event.

Where developments are located immediately downslope from the water race it is recommended a review of slope contours and run-out paths be completed, any specific instability or engineering requirements that would be appropriate should then be reviewed. If required, landscaping/diversion bunds, earthworks, local stabilisation or other measure, e.g. a minimum building floor level, can be utilised to control any identified risk.

4.8 Dam/Storage Ponds

An irrigation pond is proposed in the south east area of the site, and, modifications to the storage volume of an existing farm dam are proposed in the northern area.

Resource and building consent can be required for dam structures depending on water volumes, water depths, storage capacity and dam height. A general overview is provided below.

Resource Consent

Dams are considered a permitted activity under the Regional Plan: Water for Otago (ORC) providing:

- The size of catchment is less than 50 ha;
- Water immediately upstream of the dam is no more than 3m deep; and

- Volume of water stored by the dam is no more than 20,000m3.

If any one of the above conditions is met then Resource Consent is required (note these are the generally exceeded triggers – for a full list see 12.3.2 of the plan)

Building Consent

Dams are considered 'large dams' and require a building consent if the dam is >4m high (toe to crest) and the volume to crest is >20,000m3.

5 Conclusions and Recommendations

The proposed development is considered feasible from a geotechnical perspective and no significant hazards or other geotechnical issues have been identified that will preclude the development proposal.

Further geotechnical investigation and assessment will be required to support detailed design of the individual development areas and buildings e.g. retaining walls, foundations, or specific requirements for construction near natural and engineered fill slope crests.

The new irrigation pond and modifications to an existing dam are proposed. Consents may be required, as outlined in Section 4.7.

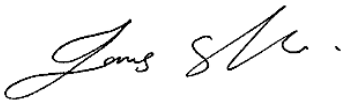
The water race represents a low risk to downslope developments and recommendations are provided in Section 4.6.

6 Applicability

This report has been prepared for the benefit of Hogan's Gully Farm with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose without our prior review and agreement.

It is important that we be contacted if there is any variation in subsoil conditions from those described in this report.

Report prepared by:



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James Stewart
Engineering Geologist

Reviewed for GeoSolve Ltd by:

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Paul Faulkner
Senior Engineering Geologist

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Appendix A: Site Plans

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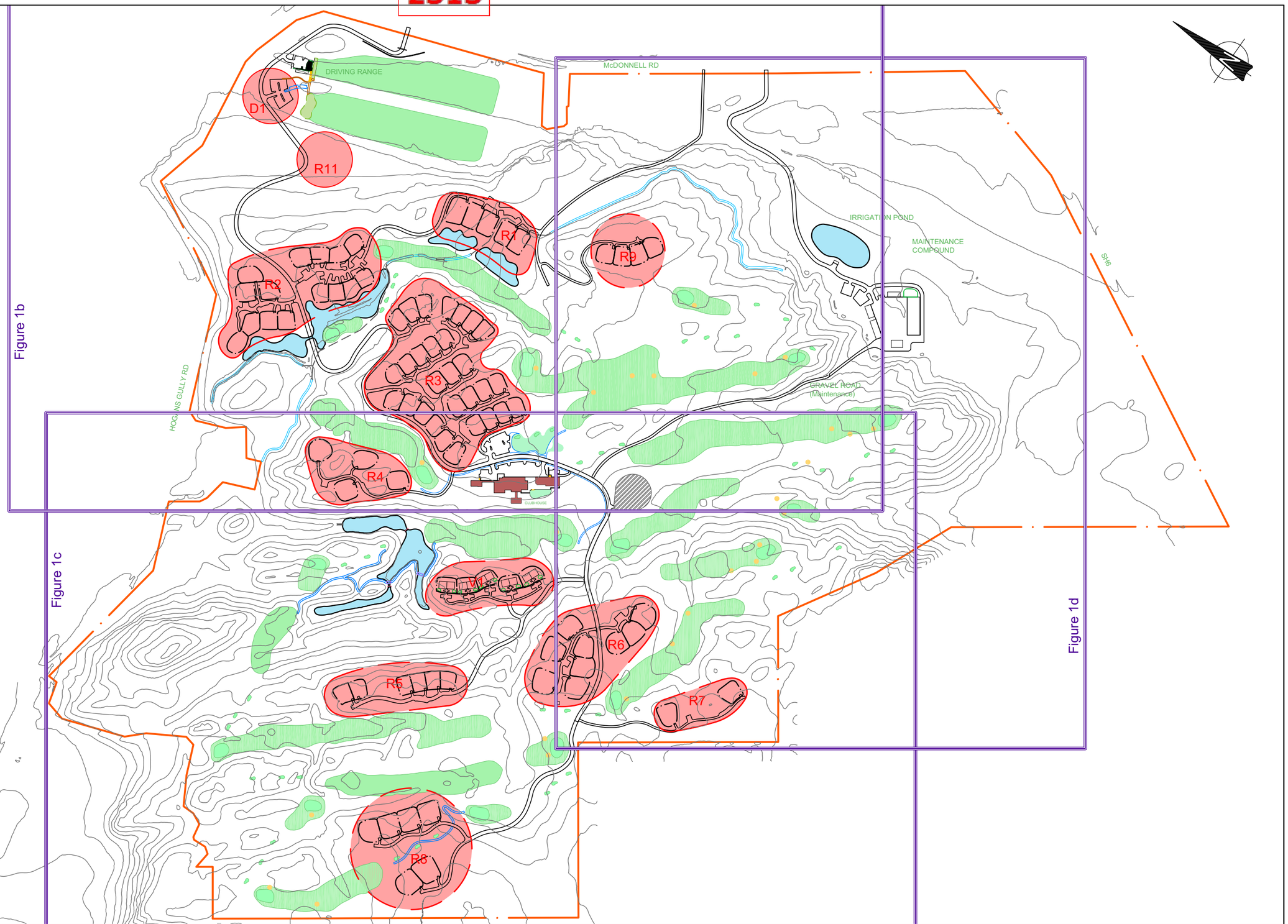

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DRAWN	WCG	Dec.17
DRAFTING CHECKED	JAS	Dec. 17
APPROVED	PGF	Dec. 17
CADFILE: 170929_SPf.dwg		
SCALES (AT A3 SIZE): 1:6000		
PROJECT No: 170929		

Hogans Gully Farm

Resource Consent Geotechnical Assessment

Site Plan

FIG No: Figure 1a

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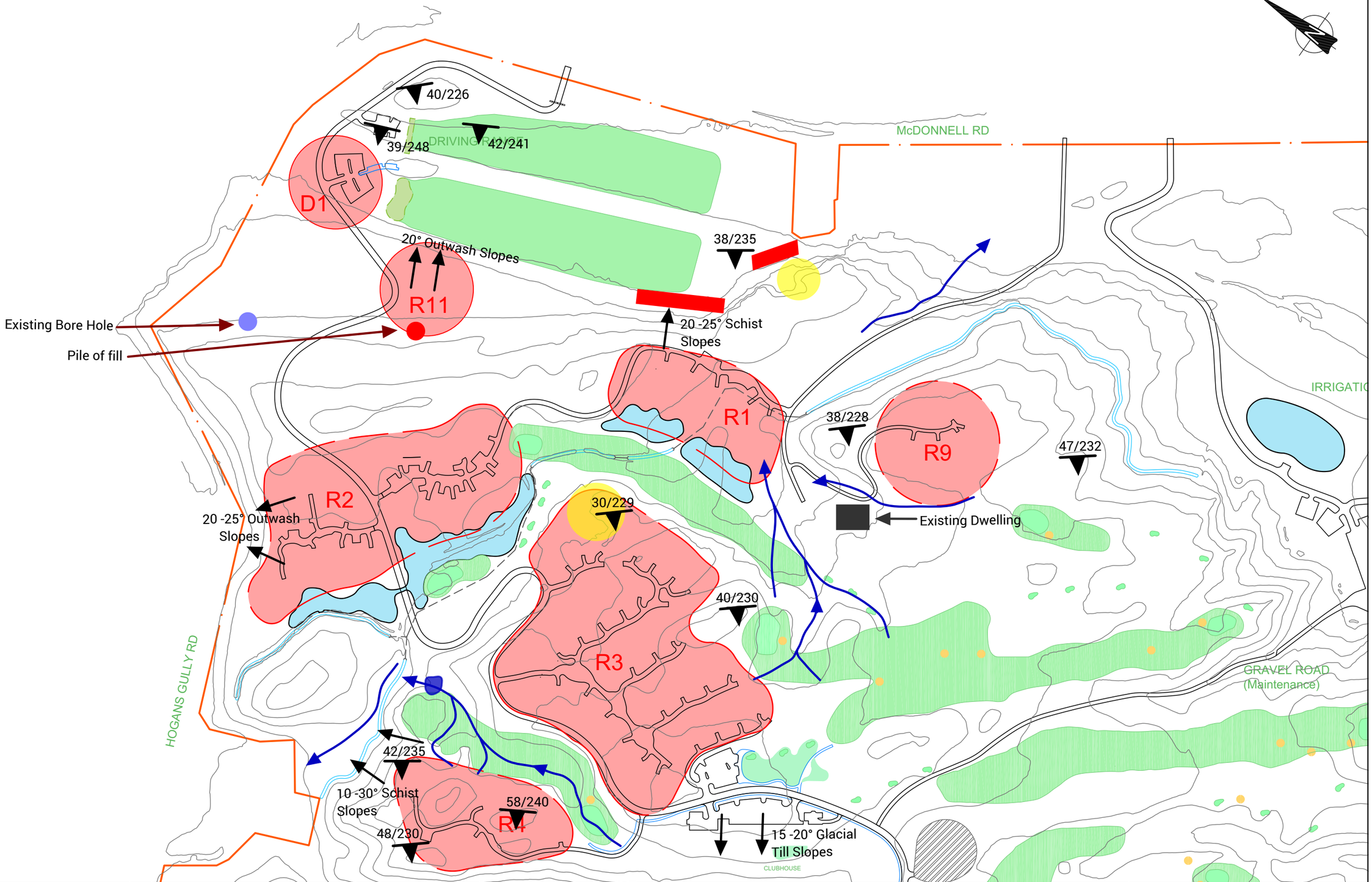

= Slope Angle and Direction

= Existing Flow Path

SCALE 1:3500

0 35 70 105 140 175 (m)

= Schist Quarry

= Schist Foliation Dip/Dip Direction

= Existing Water Storage Pond

= Fills associated with farm tracks

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DRAWN	WCG	Dec.17
DRAFTING CHECKED	JAS	Dec. 17
APPROVED	PGF	Dec. 17
CADFILE: 170929_SPf.dwg		
SCALES (AT A3 SIZE): 1:6000		
PROJECT No: 170929	FIG No: Figure 1b	REV. 0

Hogans Gully Farm

Resource Consent Geotechnical Assessment

North Eastern Area

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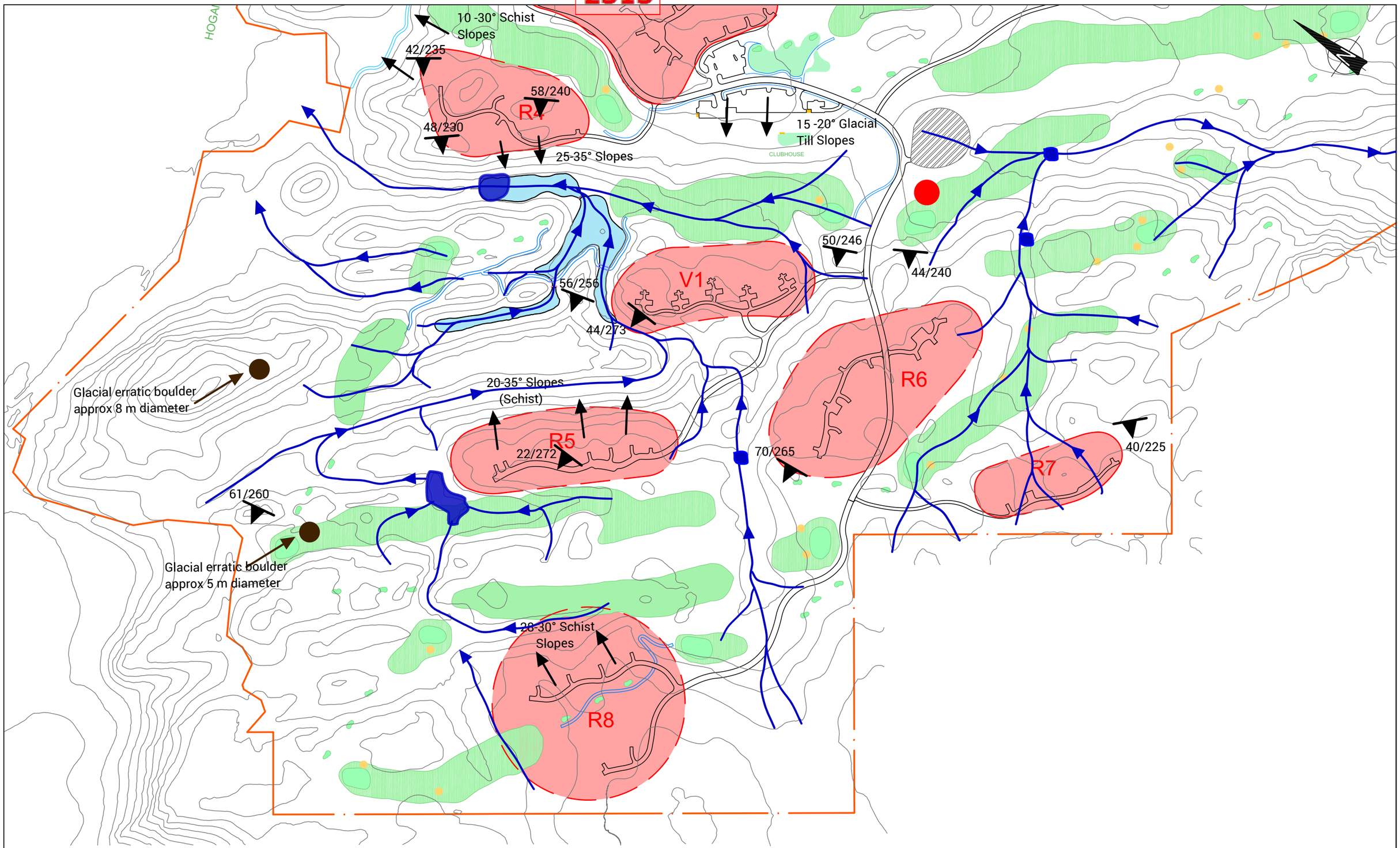
2313



= Existing Flow Path

= Slope Angle and Direction

SCALE 1:3500

0 35 70 105 140 175 (m)

= Schist Foliation Dip/Dip Direction

= Glacial Erratic Boulder

= Offal Pit

= Existing Water Storage Pond

= Proposed Water Storage Pond

GEOSOLVE

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DRAWN	WCG	Dec.17
DRAFTING CHECKED	JAS	Dec. 17
APPROVED	PGF	Dec. 17
CADFILE: 170929_SPf.dwg		
SCALES (AT A3 SIZE): 1:6000		
PROJECT No: 170929		

Hogans Gully Farm

Resource Consent Geotechnical Assessment

North Western Area

FIG No: Figure 1c

REV. 0

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2313

McDONNELL RD

IRRIGATION POND

MAINTENANCE COMPOUND

R9

47/232

Flooding/over toping of water race potential

38/231

GRAVEL ROAD (Maintenance)

50/246

44/240

R6

40/225

R7

= Offal Pit

= Existing Flow Path

= Schist Foliation Dip/Dip Direction

SCALE 1:3000

0 30 60 90 120 150 (m)

GEOSOLVE

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DRAWN	WCG	Dec.17
DRAFTING CHECKED	JAS	Dec. 17
APPROVED	PGF	Dec. 17
CADFILE: 170929_SPf.dwg		
SCALES (AT A3 SIZE): 1:3000		
PROJECT No: 170929		

Hogans Gully Farm

Resource Consent Geotechnical Assessment

Southern Area

FIG No: Figure 1d

REV. 0

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2313

Ecological Review for Proposed Hogans Gully Farm – Golf Resort Zone

For

Hogans Gully Farming Ltd

October 2015

Davis Consulting Group Limited
P.O.Box 2450
Wakatipu 9349
03 409 8664
Document ID: 15044a

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2313

Ecological Review for Proposed Hogans Gully Farm Golf Resort Zone

Document Status

Version	Purpose of Document	Prepared By	Reviewer	Review Date
A	Draft for review	RT	GD	14 September 2015
B	Draft for Client Review	RT	GD	9 October 2015
O	FINAL	RT	GD	22 October 2015

DAVIS consulting group

Amended version received 26/02/2018

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF PLATES

2313

1.0 INTRODUCTION

Hogans Gully Farming Limited (HGFL) are proposing to rezone approximately 130 hectares of Rural General zoned land between Arrow Junction and Arrowtown as a Golf Resort Zone within the Wakatipu Basin (see Figure 1 below). The new zone would provide for an 18 hole golf course, a clubhouse, a lodge/hotel with accommodation units, and residential house sites. As part of the development, HGFL proposes to undertake ecological restoration work in order to support any existing ecological values and make a contribution to improving the natural heritage of the site and the wider Wakatipu Basin. In order to examine the risks and potential ecological benefits of the proposed development, HGFL commissioned consulting ecologists Davis Consulting Group Limited (DCG) to undertake an assessment of the existing values and explore the ecological restoration opportunities for the site.

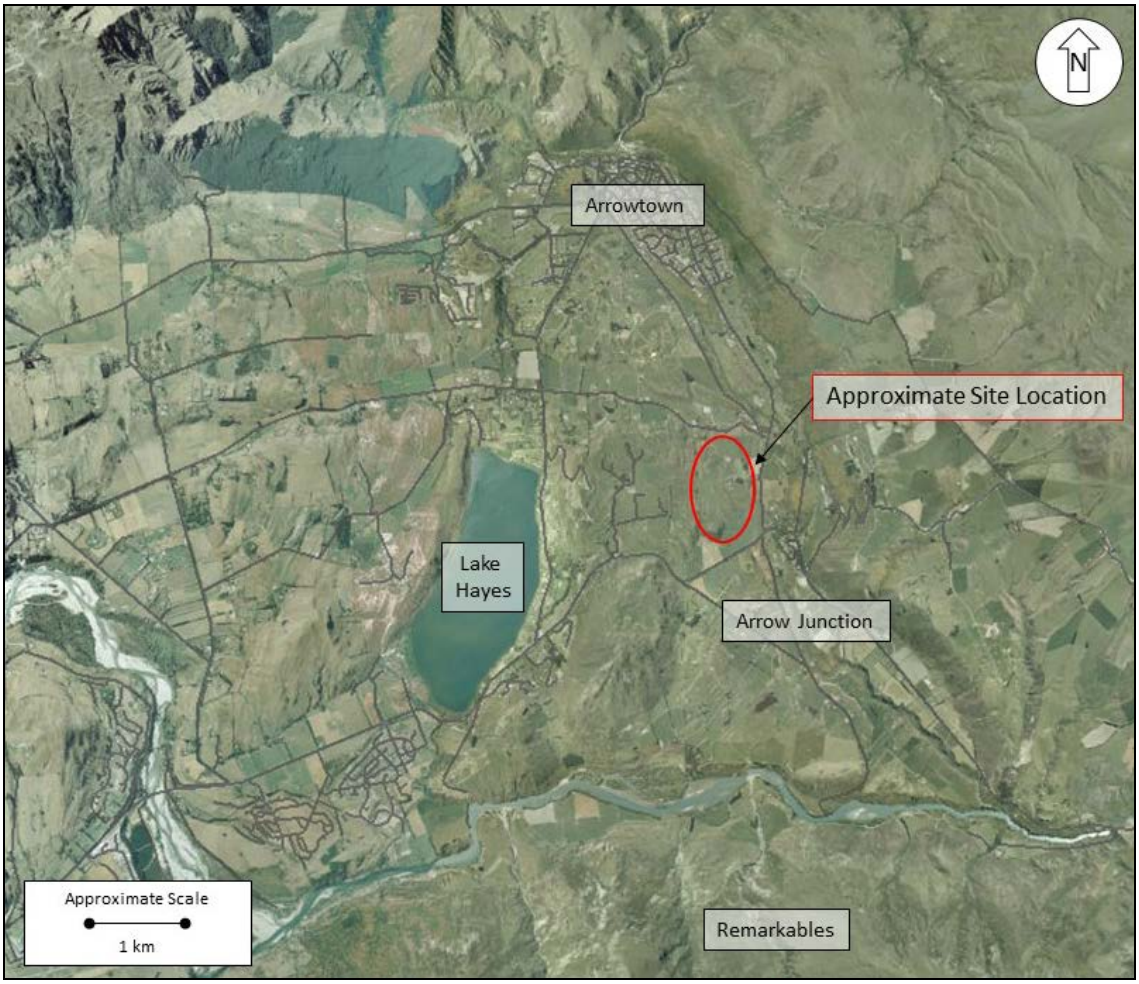

Figure 1: Site Location Plan.

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This ecological assessment is set out as follows:

- Section 2: Documents the ecological context of the study area and the existing ecological values and reviews the ecological effects of the proposal;
- Section 3: Examines ecological restoration opportunities, presents an ecological management areas for the site and discusses the potential ecological benefits for the site and the Wakatipu Basin; and
- Section 4: Presents the conclusions and recommendations.

2.0 EXISTING ENVIRONMENT

The study area for the ecological review is presented in Figure 2 (red outline) and encompasses the area proposed to be rezoned. The ecological context and values of this study area are described herein, as well as that of the wider Wakatipu Basin to inform the assessment of the biodiversity that is present in close proximity to the site.

2.1 Physical Environment

2.1.1 Climate

The Wakatipu Basin has an almost continental climate due to its inland location and experiences the associated climatic extremes of relatively cold winters and hot summers (Meurk, 1997). The basin experiences high sunshine hours in the summer, while during winter the ground can be frozen, with snow falling but not settling for more than a few weeks (Meurk, 1997). Based on information provided on the GrowOtago website there is no strong seasonal variation in rainfall, with annual rainfall ranging from 700 – 900 mm/year.

The growing season is relatively short in comparison to more coastal locations. Frost events can still occur in late October/early November, while the high temperatures during summer (December to February) allow for a short but productive growing season. The growth and survival of plants can be affected by drought conditions that, while unusual, can occur during summer months, and frost-thaw activity during winter (Meurk, 1997).

2.1.2 Landform and Geomorphology

The study area is dominated by multiple ridge and gully systems, rock outcrops and plateaus, all ranging between 380 to 420 metres in altitude. The underlying geology is “pelitic schist, variably segregated, veined and foliated” (Turnbull, 2000).

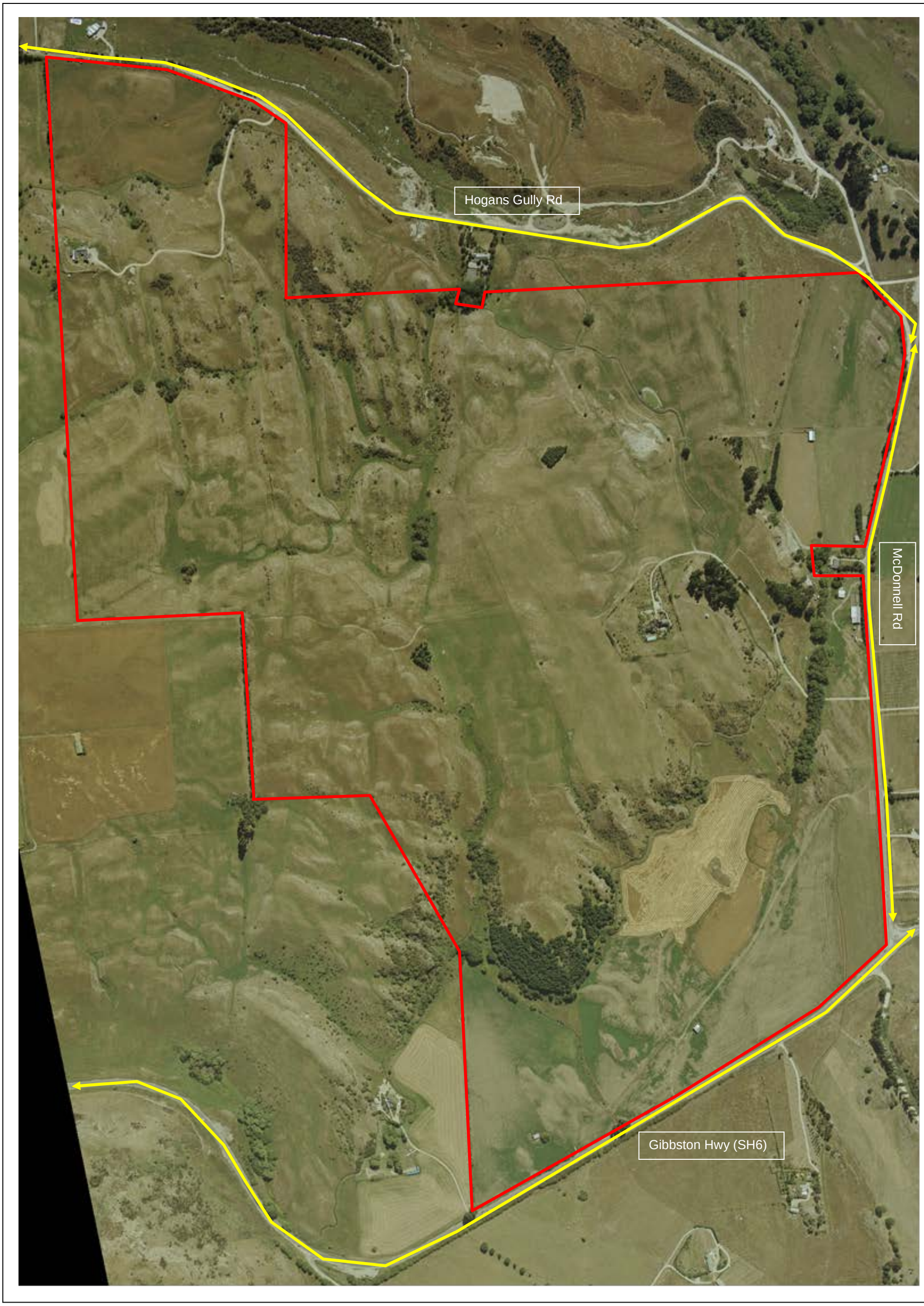

Figure 2: Hogans Gully Farm Study Area located within red outline.

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2.2 Biological Environment

2.2.1 Flora and Vegetation

Historical Vegetation

The Wakatipu Basin has had a long history of pastoral activity that has resulted in almost the complete loss of indigenous ecosystems. Prior to human settlement the vegetation cover of the Wakatipu Basin would have consisted of shrubland and tussock grassland, with beech forest communities on higher hillslopes (Our Environment, 2015). Within the study area DCG understands the gully systems would have had a vegetation cover dominated by short tussock grassland consisting of hard tussock, blue tussock and *Elymus* spp., with shrubland communities of kowhai, native broom, coprosmas, tree daisies and matagouri within gullies and around rocky outcrops. A number of small wetlands would also have been present within the gully floors, dominated by sedges, rushes, toetoe and flax.

The significant loss of indigenous ecosystems within the Wakatipu Basin and other similar environments throughout the South Island has been recognised in the New Zealand threatened environment classification (TEC). Figure 3 presents the threatened environments within the Wakatipu Basin and shows the study area lies within an environment with less than 20% indigenous vegetation cover remaining. The TEC lists the remaining vegetation within these environments as acutely or chronically threatened, as biodiversity loss has been shown to accelerate when the area remaining reduces to below 20% of its original extent (Walker *et al.,* 2008).

Historical activities in the basin have resulted in the biological environment now dominated by exotic pasture grasses and hedgerows within the rural zoned land. There are however small degraded remnants of indigenous systems that persist. The remnants that are present within and surrounding the study area are described below.

Existing Surrounding Indigenous Vegetation and Habitat

Existing indigenous vegetation and habitat surrounding the study area are shown in Figure 4. The study area is situated between two of the largest remnant indigenous ecosystems within the eastern side of the Wakatipu Basin: to the north are beech forest remnants on the lower south facing slopes of Coronet Peak and shrubland communities within the catchment of Bush Creek, and to the south are large tracts of grey shrubland within the Rastus Burn and Owen Creek on the northern lower slopes of the Remarkables (Figure 4). These areas contain the greatest biodiversity values in the vicinity of the study area and support bird populations that will utilise habitat in the Wakatipu Basin, largely for feeding purposes.

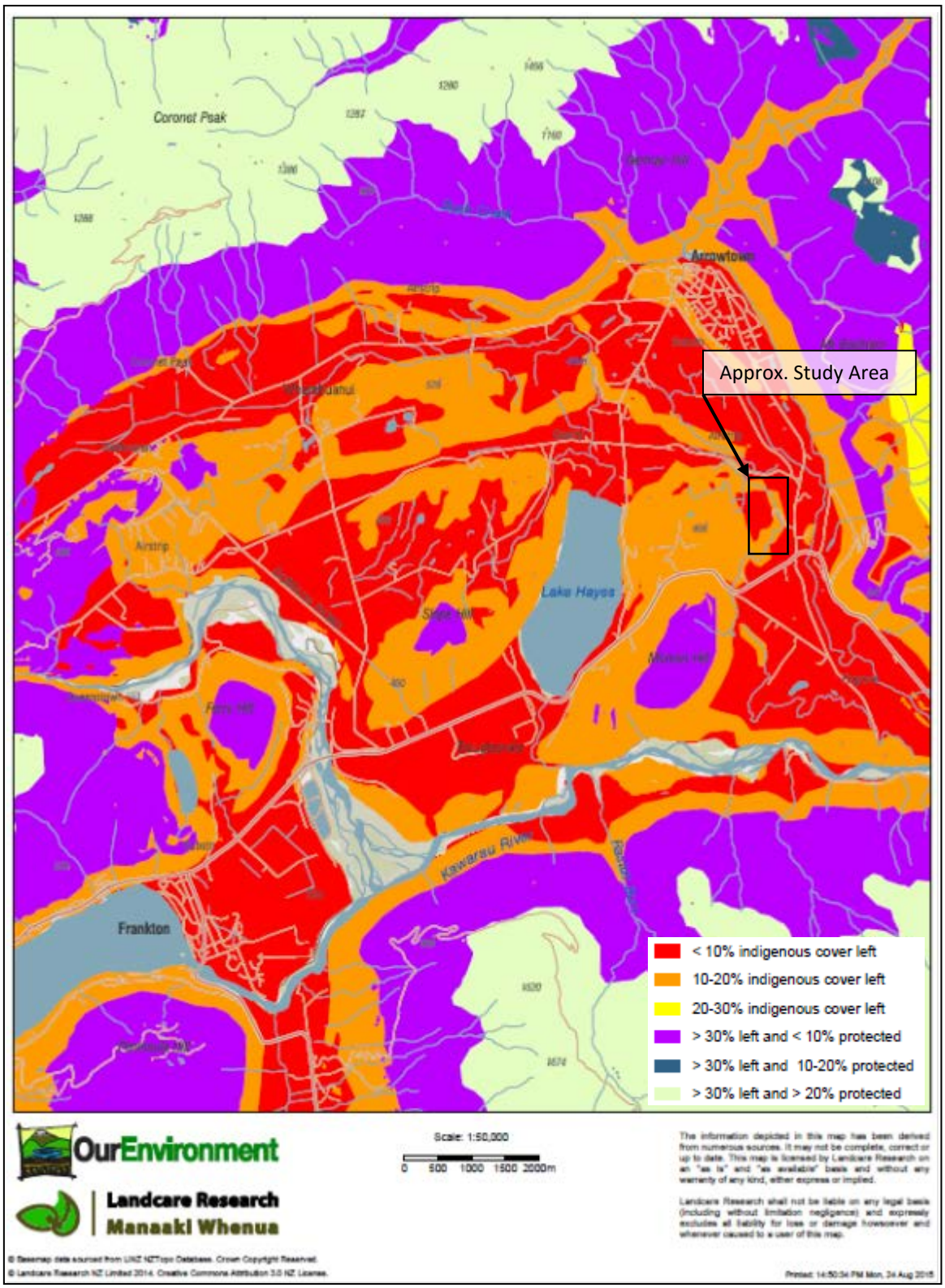

Figure 3: Threatened Environment Classification (reproduced from "Our Environment" website (*www.ourenvironment.scinfo.org.nz*)

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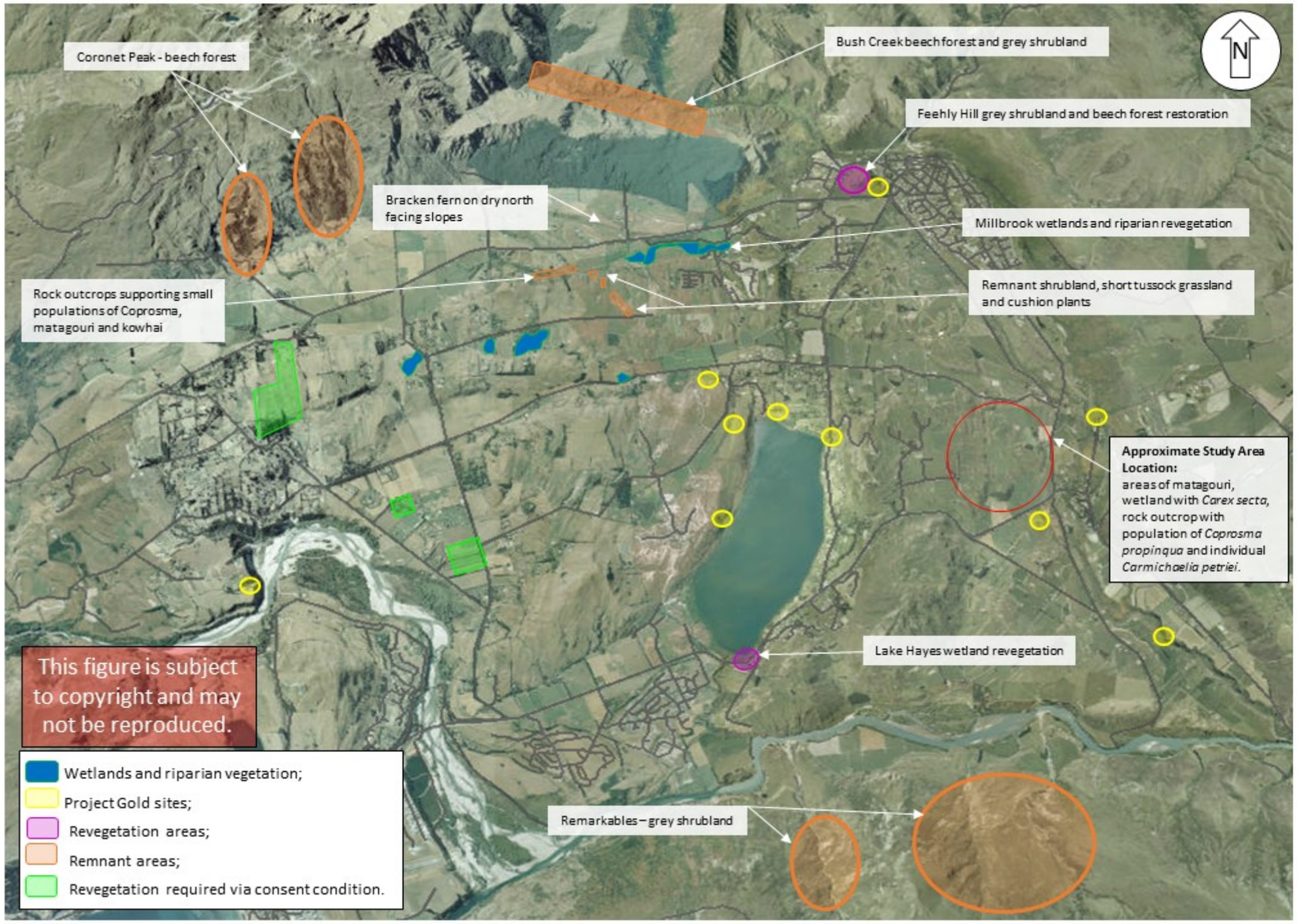

Figure 4: Hogans Gully Farm Study Area – Surrounding Indigenous Vegetation and Habitat
Note: Figure 4 is a schematic spatial representation of indigenous ecological values only – the plan is not a detailed plan of the extent of the identified sites.

Existing Indigenous Vegetation and Habitat within Study Area

Within the study area the dominant vegetation type is exotic pasture grasses interspersed with exotic trees. However, there are remnant patches of grey shrubland and wetland communities that remain. Figure 5 presents a plan showing the layout of the Hogans Gully Farm Study Area and representative photographs of the areas that have been identified to have some ecological value. The indigenous plant species recorded on site are provided in Table 1.

Table 1: Indigenous Plant Species and their Associated Threat Status.

Common Name	**Scientific name**	**Threat Classification** (de Lange *et al.*, 2013).
Bracken Fern	*Pteridium esculentum*	Not threatened
Blue wheatgrass	*Elymus solandri*	Not threatened
Blue tussock	*Poa colensoi*	Not threatened
Cushion plants	*Raoulia* species	Not threatened
Porcupine shrub	*Melicytus alpinus*	Not threatened
Hard Tussock	*Festuca novae-zelandiae*	Not threatened
Bush lawyer (climber)	*Rubus* species	Not threatened
Desert/native broom	*Carmichaelia petriei*	Not threatened
Matagouri	*Discaria toumatou*	Not threatened
Grassland sedge	*Carex breviculmis*	Not threatened
Mingimingi	*Coprosma propinqua*	Not threatened

Grey Shrubland within Northern Gully System

The gully system at the northern end of the study area contains remnant areas of grey shrubland (areas #1 within Figure 5), which is dominated by matagouri (*Discaria toumatou*), and includes bush lawyer (*Rubus* species), bracken fern (*Pteridium esculentum*), two individual specimens of native broom (*Carmichaelia petriei*), as well as small areas of tussock grassland including hard tussock (*Festuca novae-zelandiae*), blue tussock (*Poa colensoi*), grassland sedge (*Carex breviculmis*), porcupine scrub (*Melicytus alpinus*), Elymus species and Raoulia species. The matagouri dominant shrubland lacks the original diversity of these communities with Coprosma, Olearia and kowhai no longer present. Weed species are interspersed within the matagouri shrubland and include the woody weeds elder (*Sambucus nigra*), hawthorn (*Crataegus monogyna*), broom (*Cytisus scoparius*), willow (Salix species) and gorse (*Ulex europaeus*), introduced herbaceous plants woolly mullein (*Verbascum Thapsus*) and stinging nettle (Urtica species), and pasture grasses. Plate 1 presents photographs of existing indigenous species and communities within the northern gully systems.

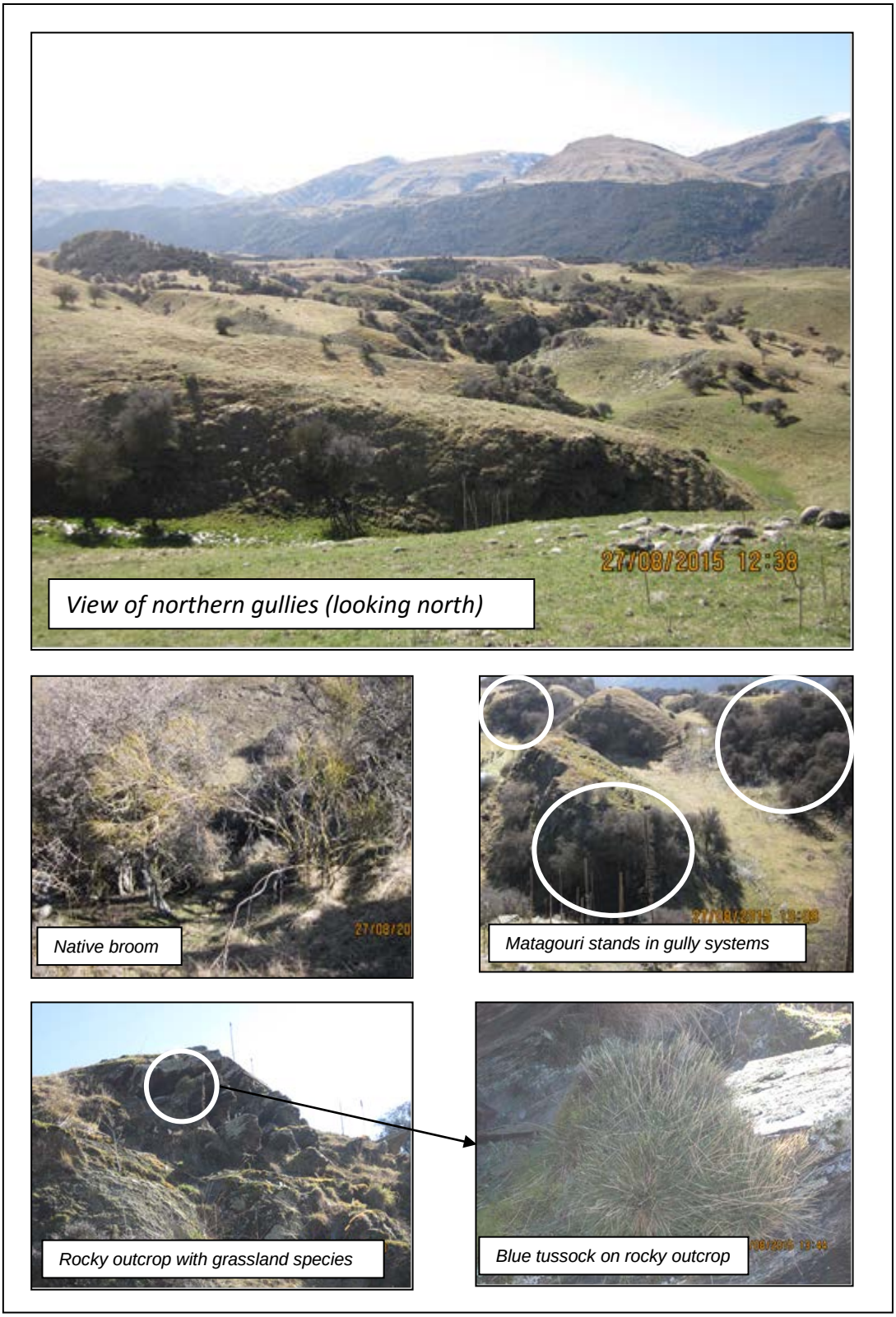

Plate 1: Indigenous vegetation values within northern gully systems.

Grey Shrubland within Southern and South-eastern Gully Systems

At the southern end of the site, the gully system (areas #4 within Figure 5) includes mature *Coprosma propinqua* (mingimingi) on the steep, rocky true right side of the gully, along with matagouri and bush lawyer. Exotic species similar to the northern gullies were also present

including willow, elder and hawthorn. It is likely that the isolated patch of Coprosma has survived due to the rocky and steep terrain it is located on, which has limited pastoral activities such as burning and grazing. Plate 2 presents photographs of the native species present within the southern gully. There are also matagouri shrublands remaining within the south-eastern gullies, which also contain woody weed species (see area #5 within Figure 5).

Plate 2: Indigenous vegetation values within southern gully system.

Wetlands, Ponds and Riparian Vegetation within Gully Systems

Historically a range of wetlands would have been present in the study area. The wetlands would have been associated with poor drainage sites in the gully depressions and the flood plain of the stream running through the site. There is one large wetland still present on site (area #2 within

Figure 5) and a number of smaller wetlands and riparian edges located within the gully systems (areas #3 on Figure 5). The largest wetland contains a mature stand of the pedestal sedge *Carex secta*. The smaller wetland and riparian margins are largely associated with the onsite ephemeral stream and are dominated by introduced species including introduced soft rush (*Juncus effusus*), willows (Salix species) and swards of introduced grasses. Plate 3 shows examples of these wetlands and riparian areas on site.

Plate 3: Wetland and riparian areas present within study area.

2.2.2 Fauna

The vegetation communities that remain within the study area and the wider Wakatipu Basin are all small in scale, highly degraded from their original condition and isolated. The loss and degradation of habitat has resulted in a significant loss of both flora and fauna diversity. Notwithstanding this point, remnants that do persist provide habitat for indigenous wildlife, especially if wildlife corridors are maintained between patches of fragmented native habitat.

Skinks and Geckos

The remaining matagouri and *C. propinqua* vegetation and rocky outcrops provide habitats that may support the following species (Jewell, 2006; DOC, 2015):

- Cromwell gecko (*Woodworthia* "Cromwell");
- green skink (*Oligosoma chloronoton*);
- cryptic skink (*O. inconspicuum*);
- McCann's skink (*O. maccanni*);
- common skink (*O. polychroma*); and,
- the large Otago gecko (*Woodworthia* 'Otago large').

Of the above, the green skink, large Otago gecko and cryptic skink are listed as 'At Risk – Declining'; the remaining species are not threatened (Hitchmough *et al.,* 2013).

Invertebrates

New Zealand invertebrate species have a high level of endemism, in particular within the Wakatipu Basin (Lucas Associates, 1995). The isolated areas of native vegetation may provide habitat for native invertebrates and allow their use of the surrounding exotic grassland (Derraik *et al.,* 2005). Increased areas of indigenous vegetation on site would be beneficial to native invertebrate populations (Derraik *et al.,* 2005).

Avifauna

Four native non-threatened bird species were observed on site: a harrier hawk (*Circus approximans*); pukeko (*Porphyrio melanotus*); a breeding pair of paradise shelduck (*Tadorna variegata*) around the largest wetland; and a grey warbler (*Gerygone igata*) amongst the matagouri shrubland (see Figure 4). There are at least another 18 native bird species present within the Wakatipu Basin that may already visit the site (New Zealand Birds Online, 2015). These bird species and their threat status are provided in Table 2 below. Five of the 22 species are classified as 'At Risk': the eastern falcon, South Island pied oystercatcher, the black shag, the pied stilt and the New Zealand pipit (Robertson *et al.*, 2013). The eastern falcon has been observed in the surrounding environment, adjacent to the study area and is highly likely to periodically use the habitat within the gully systems, for nest sites in the rocky outcrops and hunting grounds within the grey shrubland.

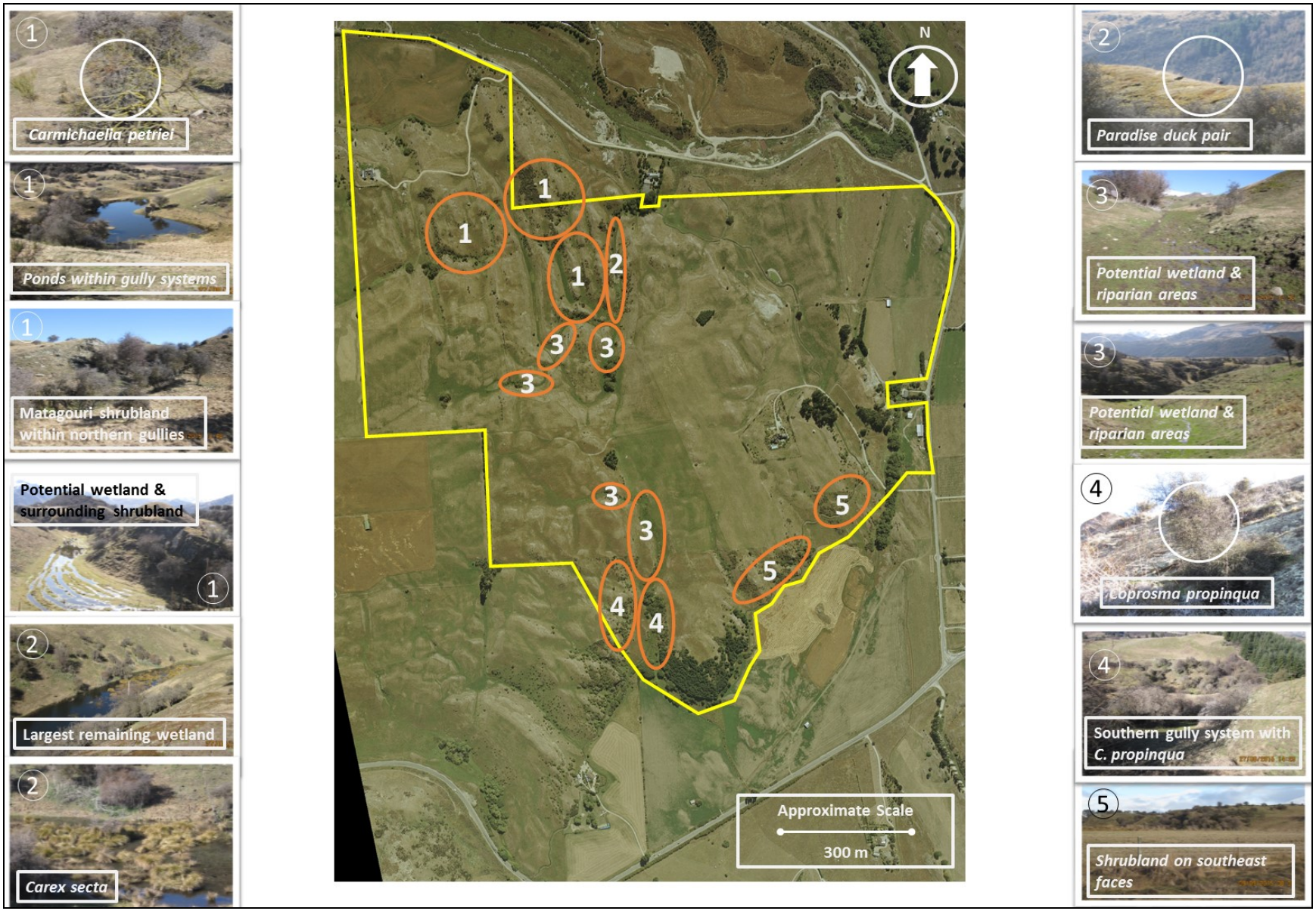

Figure 5: Ecological Values of Hogans Gully Farm Study Area.

Table 2: Indigenous Bird Species and their Associated Threat Status.

Common Name	Scientific Name	Threat Classification (Robertson *et al.*, 2013)	Associated Habitat
Eastern falcon	*Falco novaeseelandiae* 'eastern'	At Risk - Recovering	Forest, tussock grassland & shrubland.
South Island pied oystercatcher	*Haematopus finschi*	At Risk – Declining	Riverbeds, farmland & grassland.
Black shag	*Phalocrocorax carbo novaehollandiae*	At Risk – Naturally Uncommon	Streams, lakes, ponds.
Pied stilt	*Himantopus himantopus leucocephalus*	At Risk - Declining	Wetlands.
NZ Pipit	*Anthus novaeseelandiae*	At Risk - Declining	Rough open habitats.
Fantail	*Rhipidura fuliginosa fuliginosa*	Not Threatened	Forest & shrubland.
Bellbird	*Anthornis melanura melanura*	Not Threatened	Forest & shrubland.
Harrier hawk	*Circus approximans*	Not Threatened	Farmland & wetlands.
Welcome swallow	*Hirundo neoxena neoxena*	Not Threatened	Wetlands
Grey warbler	*Gerygone igata*	Not Threatened	Shrubland & forest.
Paradise shell duck	*Tadorna variegata*	Not Threatened	Farmland, grassland, ponds.
Tui	*Prosthemadera novaeseelandiae novaeseelandiae*	Not Threatened	Forest & shrubland.
Southern black-backed gull	*Larus dominicanus dominicanus*	Not Threatened	Farmland & tussock grassland.
Spur-winged plover	*Vanellus miles novaehollandiae*	Not Threatened	Wetlands, farmland & grassland.
NZ woodpigeon	*Hemiphaga novaeseelandiae*	Not Threatened	Forest & shelterbelts.
Sacred Kingfisher	*Todiramphus sanctus vagans*	Not Threatened	Farmland & lakes.
Pukeko	*Porphyrio melanotus melanotus*	Not Threatened	Wetlands, farmland, grassland & scrub.
Shining cuckoo	*Chrysococcyx lucidus lucidus*	Not Threatened	Forest & shrubland.
Silvereye	*Zosterops lateralis lateralis*	Not Threatened	Widespread.
Australasian shoverler	*Anas rhynchotis*	Not Threatened	Wetlands
Little shag	*Phalacrocorax melanoleucos*	Not Threatened	Lakes, rivers, ponds & streams.
More pork	*Ninox novaeseelandiae*	Not threatened	Forests & sparsely-wooded farmland

2.3 Ecological Values Summary

The existing ecological values within the Hogans Gully Farm study area are associated with the northern and southern gully systems and the wetland containing a population of remnant *Carex secta*. A summary of the ecological values on site are provided in Table 3 below. All the remaining native vegetation is highly degraded, isolated and generally small in scale, and threatened plant species are highly unlikely to be present on the site. However, the remaining native vegetation on site is highly likely to be utilised by the threatened eastern falcon, along with the South Island pied oystercatcher, as well as native lizard species (non-threatened and threatened).

Table 3: Summary of Ecological Values

Ecological Value	Description
Utilisation of site by threatened bird species	Highly likely the eastern falcon utilises the site for foraging and/or nesting, and likely South Island pied oystercatcher, black shag, pied stilt and NZ Pipit may utilise the site.
Utilisation of site by native bird species	Seventeen non-threatened native bird species may utilise the site from time to time (see Table 2 for species).
Utilisation of site by threatened lizard species	Given the degraded nature of the habitat and the presence of the mustelids and wild cats in the area it is unlikely threatened skinks and geckos are present on the property.
Utilisation of site by native lizard species	The site may support the Cromwell gecko, McCann's skink and the common skink.
Native vegetation within an acutely and chronically threatened environment	The presence of matagouri, *Coprosma propinqua*, *Carmichaelia petriei* within acutely and chronically threatened environment.
The large wetland habitat	The largest wetland on site has mature *Carex secta* and provides habitat for native pukeko and paradise shelduck.
Gully systems	The northern, southern and southeastern gully systems have retained native vegetation onsite within acutely and chronically threatened environments, and provide habitat for native wildlife.

2.4 Ecological Impact Matrix

The impacts from the proposed re-zone and the associated level of their effect, based on ecological value and magnitude (EIANZ, 2015), have been assessed against the remaining ecological values of the site within Table 4 below. Based on the predicted impacts and their associated level of effect, recommendations are made for impact management measures (Table 4).

Table 4: Ecological Impact Matrix[1]

Development Stage	Potential Effect / Impact	Specific Effect/Impact	Level of Potential Effect[2]	Recommended Impact Management Avoid/Mitigate/Remediate
Construction (earthworks; turf grass planting; infrastructure)	Removal of native vegetation or a natural area (wetland/pond/riparian habitat)	Permanent clearance of native vegetation and wildlife habitat, including destruction of large wetland.	Very High	• No threatened native plants will be cleared. • Only exotic species will be cleared, as well as isolated, individual matagouri. • Existing native vegetation should be retained, and expanded via restoration efforts. • No disturbance to the large wetland on site.
	Alteration in water levels in watercourses or wetlands	Alteration of established wetland with mature *Carex secta.*	Very High	• No disturbance to the large wetland on site, except for restoration purposes.
	Soil erosion and sediment runoff into wetland and streams.	Degrade water quality and habitat in wetland and streams.	Very High	• All earthworks will require a specific management/operation plan to mitigate the risk of runoff into wetlands or streams.
Operation	Surface and ground water contamination via irrigation and discharge of pollutants, i.e. chemical runoff from golf course (pesticides, fertilisers and insecticides)	Algal blooms and bioaccumulation in wildlife including aquatic species and associated plant and animal death.	Very High	• Limited area of intensely managed turf. • Buffer zones between golf course and wetland, riparian, pond and native vegetation habitat. • Education of staff applying chemicals / maintaining golf course.
	Construction of golf course, houses, clubhouse, lodge and accommodation units.	Permanent clearance of native vegetation and wildlife habitat.	Very High	• Buildings and golf course to be located within existing exotic vegetation excluding isolated, individual matagouri plants. • All landscaping to be dominated by native plants.
	Roading and associated traffic	Loss of native wildlife, in particular lizards and avifauna.	Very High	• Existing native vegetation should be retained, and expanded via restoration efforts.
	Light and noise pollution	Disruption to native wildlife biological cycles and consequently population numbers	Low	• Low density rural residential housing unlikely to have major contribution to light and noise pollution

[1]This table is based on 'Ecological Impact Assessment (EcIA) EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems' (EIANZ, 2015).
[2] Based on ecological value and magnitude of impact (EIANZ, 2015).

3.0 ECOLOGICAL RESTORATION OPPORTUNITIES

3.1 Overview

The history of pastoral activity throughout the study area and the wider Wakatipu Basin has resulted in the almost total conversion of the landscape to an ecology dominated by exotic pasture grasses, hedgerows and woody weeds. Indigenous terrestrial ecology values can now largely only been found within wetlands and on sites that have been protected by rock outcrops and steep gully systems. Consequently, DCG considers the proposed development of the study area is highly unlikely to result in negative effects on the indigenous ecology of the property provided HGFL exclude and enhance the large wetland, grey shrubland and rock outcrops within the northern gully system from the development footprint.

In 1997 the Wakatipu Environmental Society engaged ecologist Colin Meurk to examine the natural heritage of the Wakatipu Basin and provide advice on restoration opportunities. The outcome of this investigation "*Rediscovering & Restoring Natural Heritage in the Wakatipu Basin*" has been one of the cornerstone pieces of work that has provided a philosophy and guidance for restoration activities across the basin. Meurk (1997) suggests that recovery of indigenous vegetation would include enhancement of waterway function, protection of remnant natural habitat, re-establishing larger more viable populations of indigenous plants and wildlife, and thus establishing improved visual and biological linkages in which sustainable heritage elements are integrated within the productive activities of the basin.

The path towards the vision set out by Meurk (1997) is in progress and is clearly shown in the following:

- Establishment of Project Gold by the Department of Conservation with the objective to encourage Otago people to grow and look after their own kōwhai trees and strengthen enthusiasm for dryland forest restoration.
- Acceptance by council that ecological restoration can be a positive benefit under the Resource Management Act, with these benefits often integral in the granting of subdivision consents such as the Walter Peak, Threepwood, Littles Stream, Jacks Point, Hawthorn and Highground.
- Establishment of the Wakatipu Reforestation Trust, which has attracted significant funding to construct a native plant community nursery for the Wakatipu, and plant out and maintain multiple native planting sites on public land and identification of further sites for restoration.

3.2 Application of Metapopulation Theory and Golf Course Design

Metapopulation ecology considers landscapes as a network of fragmented populations of habitat and their associated wildlife; that is, habitat patches connected via migration (Hanski, 1998). The re-establishment of indigenous habitat within the Wakatipu Basin provides a network of isolated populations of native flora and fauna. While habitat fragmentation is a leading cause of decreasing biodiversity, restoration via habitat patch networks can increase biodiversity so long as the key issues of size, quality and degree of isolation of habitat patches is addressed (Gange *et al.,* 2003; Hanski, 1998).

Golf courses have the potential to support increased biodiversity and ecological values, especially where the environment has already been severely impacted by human activities, particularly agricultural activities (Colding and Folke, 2009). Golf courses can increase native habitat patches and thus create and expand habitat networks via restoration of the less intensively manage fairways and non-playing areas such as the roughs (Gange *et al.,* 2003).

The ability of a golf course to increase ecological values lies in the condition of the land prior to construction (Terman, 1997). If the remaining ecological values within the Hogans Gully Golf study area are retained and enhanced, and additional areas restored, Hogans Gully Golf Course could become a 'naturalistic' golf course (Terman, 1997), providing a gain in ecological values for the site and surrounding Wakatipu Basin.

In order to protect and improve biodiversity through habitat patch restoration, the following points with regards to metapopulation dynamics need consideration:

- Size:
    - Restoration patches need to be large and circular to oblong to prevent edge effects (Colding and Folke, 2009; Harker *et al.,* 1993 in Terman, 1997);
- Degree of isolation:
    - Ideally there should be fragments within migration distance (Hanski, 1998) with smaller habitat patches within and surrounding the study area connected (Terman, 1997);
- Quality:
    - Low/decreased human disturbance (Colding and Folke, 2009), such as utilisation of boardwalks and reduced size of access ways e.g. roads (Terman, 1997);
    - Increased vegetation cover (Colding and Folke, 2009);
    - Wildlife corridors for lizards and invertebrates due to their inability to cross between patches, whereas mobile fauna (i.e. birds) are likely to benefit more from patch restoration than less mobile species (Hodgkison *et al.,* 2007 in Colding and Folke, 2009);

- Increase structural complexity of vegetation by having a diverse range of plantings and habitats (i.e. containing a littler layer, understorey, sub canopy and canopy as well as nesting and foraging habitats) (Hodgkison *et al.,* 2007 in Colding and Folke, 2009; Terman, 1997);
- Reduced risk of bioaccumulation of chemicals by decreasing the area of intensively managed areas and any remaining chemical run-off diverted through buffer zones before entering habitat patches (Terman, 1997);
- Retention of remaining native habitat and natural features, especially wetland and riparian areas, gully systems and rock outcrops (Hanski, 1998; Terman, 1997);
- Ensure restoration is appropriate for the target species, e.g. restoration based on New Zealand's pre-human vegetation (Terman, 1997).

Ecological restoration undertaken within the study area may support and aid the survival of larger metapopulations within the basin (Terman, 1997). In particular, by providing a network of habitat patches for native bird species between the native shrubland on the northern faces of the Remarkable Ranges and the beech forest and shrubland on Coronet Peak, Feehly Hill and within Bush Creek.

3.3 Restoration Opportunities

Using the principles set out in Meurk (1997) and metapopulation theory, DCG has identified a number of ecological restoration opportunities within the proposed golf resort zone. The areas of native vegetation to be retained and enhanced, as well as additional areas for restoration within the study area are shown on Figure 6. These two types of areas are designated Ecological Protection and Enhancement (EPE) and Ecological Restoration Planting (ERP). The EPE areas are of a reasonable size and circular to oblong in shape, with as few breaks between areas to allow for lizard and invertebrate migration, and utilise sites that provide the conditions for good growth rates and easier establishment, such as the bottom of gullies and wetlands.

The following ecological methods and requirements would need to be employed within the proposed development, especially the EPE and ERP areas, to retain and improve on the current ecological value of the site:

- Pocket planting within the existing EPE areas, to increase plant diversity and provide a food source for invertebrates, lizards and birds in these areas. Specifically, the rock outcrops are lacking key species known to support lizard species such as coprosmas and porcupine shrub (*Melicytus alpinus*) and these species along with kowhai and tree daisies should be utilised to support existing values.
- Planting at 1 m centres within the EPE and ERP areas, where no or few native plant species remain to increase existing ecological values including a food supply and cover for

invertebrates, lizards and birds in the vicinity of the gully systems, rock outcrops and wetlands;

- Planted species should represent the original pre-human plant diversity and provide for vegetation complexity (e.g. kowhai, Coprosmas, tree daisies, Hebes and native broom);
- Allowance for buffer zones between the ecological areas and the golf fairways/greens;
- Assist successional processes that are currently in their infancy, through plant species selection, to ensure a successional trajectory dominated by indigenous species rather than woody weeds;
- Rabbit control which will be fundamental to the performance of the proposed restoration works;
- Implementation of a woody weed control program to remove all woody weeds, including willows, briar, hawthorn, broom and wilding pines;
- Gardens and landscaping associated with residential development, clubhouse and lodge/hotel with accommodation units, would be dominated by native plantings for ecological, amenity and screening values;
- Restoration of wetlands and riparian areas within the northern and southern gully systems by planting into the wetlands and riparian margins with indigenous species such as *Carex, Juncus,* toetoe and flax and supported with shrubland species tolerant of periodic saturation such as *Coprosma propinqua* and kowhai, will significantly improve the function and habitat quality of these wetlands; and,
- Consideration of environmental certification through the Audubon Cooperative Sanctuary Program for Golf (http://www.audubooninternational.org/acspgolf).

Overall, adopting an ecological initiative for the proposed zone change associated with Hogans Gully Farm will protect existing native habitat for indigenous wildlife and expand native vegetation to further enhance the natural heritage values of wider Wakatipu Basin.

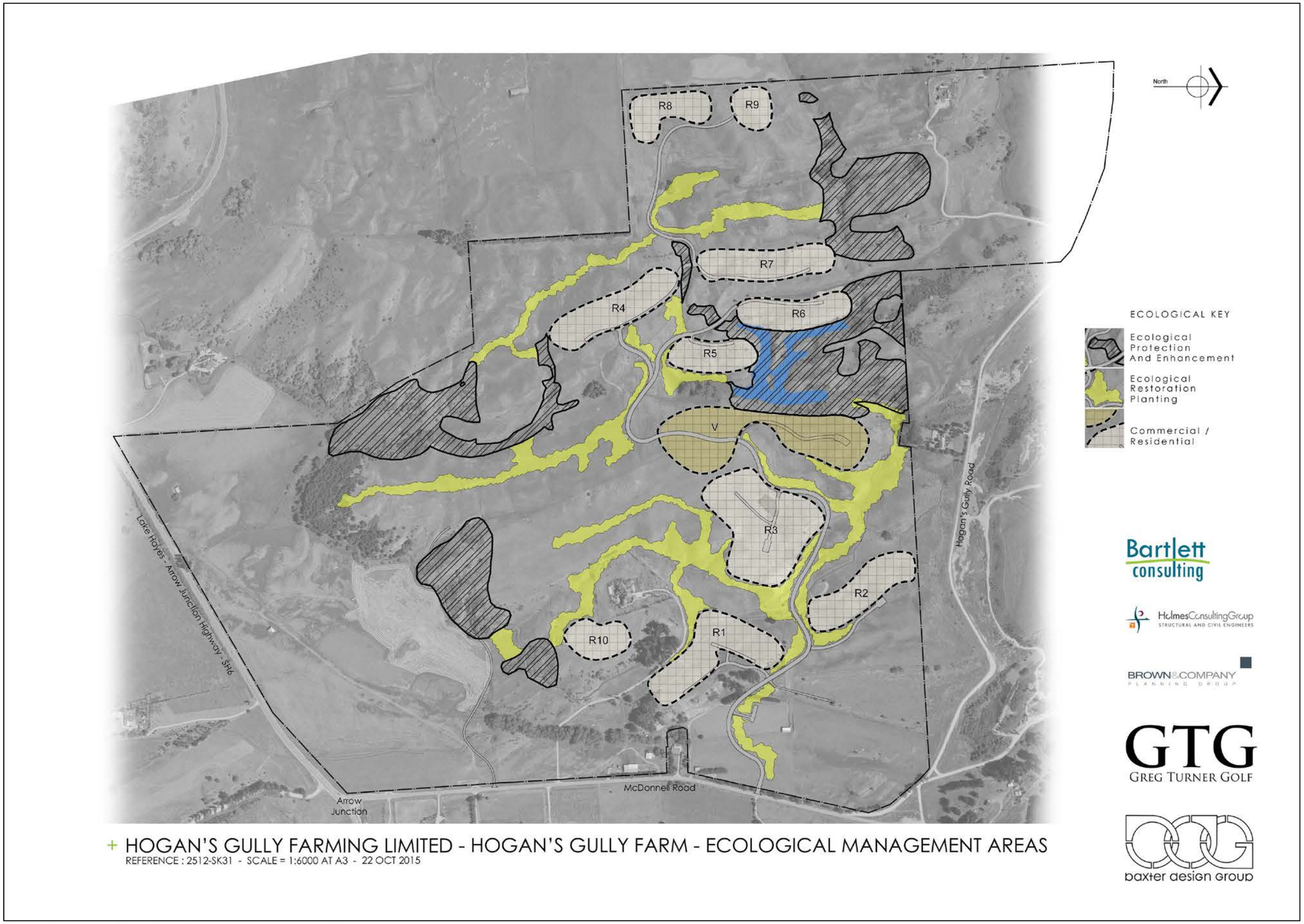

Figure 6: Hogans Gully Farm Ecological Management Plan.

DAVIS consulting group

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4.0 SUMMARY AND CONCLUSION

DCG considers the proposed development of the study area will have a less than minor impact on the remaining ecological values within the study area provided HGFL exclude, enhance and expand the large wetland, grey shrubland and rock outcrops within the gully systems from the development footprint. To ensure a low impact on the ecological environment the following conditions should be included in regulatory rules for the proposed golf resort zone:

- No threatened native plants will be cleared.
- Only exotic species will be cleared, as well as isolated, individual matagouri.
- Existing native vegetation (i.e. grey shrubland, wetlands and rocky outcrops) are to be retained, enhanced and expanded via restoration efforts, as per Figure 6 (EPE and ERP areas).
- No disturbance to occur to the large wetland on site, except for restoration purposes.
- All earthworks will require a specific management/operation plan to mitigate the risk of runoff into wetlands or streams during construction of the golf course and house sites.
- Buffer zones will be provided for between golf course areas and wetland, riparian, and pond habitats.
- Education of staff applying chemicals / maintaining golf course.
- Golf course, houses, clubhouse, lodge and accommodation units to be located within existing exotic vegetation excluding isolated, individual matagouri plants.
- All landscaping and gardens (including house lots) to be dominated by native plants.
- Rabbit control to ensure the performance of the proposed restoration works;
- Implementation of a woody weed control program to remove all woody weeds, including willows, briar, hawthorn, broom and wilding pines.

In order for the above conditions and additional restoration opportunities described herein to be implemented, DCG recommends provisions in the plan provide for the preparation of an Ecological Management Plan with the associated detail with regards to the protection and restoration work.

In summary, the retention and enhancement of existing native habitat and expansion of such areas discussed herein can contribute to the ecology of Hogans Gully Farm Golf Resort development and the wider Wakatipu Basin.

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2313

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Property, Project, Resource Management, Valuation

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2313

APL

Ref: M 15141

01 October 2015

The Manager
Brown & Company Planning Group
P O Box 1467
QUEENSTOWN

Attention: Amy Wilson-White

Dear Amy

PROPERTY: MCDONNELL & HOGANS GULLY ROAD – ARROW JUNCTION

Thank you for your instructions to inspect the above property and to provide a property report and land use capability summary. I inspected the property on 24 September 2015, and report as follows:

1. NATURE OF PROPERTY

Relatively small farming property, currently utilised for limited livestock grazing, together with providing conserved feed for dairy support purposes.

2. LEGAL DESCRIPTION

16.0914 ha Part Lot 1, DP 18290, Blk VII, Shotover SD CT 17C/602

Registered Proprietors:
- Michael John Davies, Bridget Patricia Davies and Tony Jason Sycamore.

13.3760 ha Lot 4, DP 18290, Blk VII, Shotover SD CT 10D/417

Registered Proprietor:
- Hogans Gully Farming Limited

11.7280 ha Lot 5, DP 18290, Blk VII, Shotover SD CT 17D/659

Registered Proprietor:
- Hogans Gully Farming Limited

1.4873 ha Sections 99 & 100, Blk VII, Shotover SD CT 9B/1461

Registered Proprietor:
- Hogans Gully Farming Limited

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40.8205 ha Lots 3 DP 18290, Lots 3 & 4, DP 356270, Blk VII, Shotover SD CT 229447

Registered Proprietor:
- Hogans Gully Farming Limited

24.9945 ha Lots 1 & 2, DP 356270, Blk VII, Shotover SD CT 229446

Registered Proprietors:
- Douglas James Harvie and Roger Norman Macassey

39.6605 ha Section 2, SO Plan 440817, Blk VII, Shotover SD CT 573582

Registered Proprietor:
- Hogans Gully Farming Limited

147.1572 ha Total land area, fee simple tenure.

Interests at date of search for the various titles include:

- Subject to rights to convey water in favour of Arrow Irrigation Company Limited.
- Subject to a right to draw and convey water.
- Appurtenant hereto are rights to convey electricity, water and take and pump water.
- Gazette Notice declaring adjoining road State Highway No 6 to be a limited access road.
- Land Covenants in Easement instruments 6021261.5, 6626529.3, 7157449.3, 7157449.4, 7157449.5, 7157449.6.

3. SITUATION AND LOCALITY

Situated with frontages to State Highway No 6 (Arrow Junction-Lake Hayes), McDonnell and Hogans Gully Roads, 4 kilometres south by road from Arrowtown, 17 kilometres north east by road from Queenstown. This location is on the south western side of the Wakatipu Basin and is handily situated to all community amenities in both Queenstown, Frankton, Remarkables Park and Arrowtown. This property being the remains of a larger farming property which is now tending to be surrounded by rural lifestyle and rural residential land uses.

4. RESOURCE MANAGEMENT

The zoning under the Queenstown Lakes District Council Operative District Plan is Rural General Zone, farming, viticulture and horticulture being permitted activities.

I note this location is shown as Visual Amenity Landscape on Map 2, Landscape Categorisation in the Wakatipu Basin.

Subdivision with no minimum allotment size and buildings in the Rural General Zone being a discretionary activities.

5. CLIMATE TYPOGRAPHY AND ALTITUDE

Rainfall ranges from 650 – 725 millimetres per year, depending on seasonal conditions, semi Central Otago climate with tending cold severe winters and tending dry summers.

Contour comprising some 87.2 hectares flat to easy rolling, 61 hectares moderately rolling to moderately steep terraces.

Altitude ranging from 380 – 460m above sea level.

6. APPROXIMATE SOILS TYPES

37.0 ha.	Shotover soils, good quality fine sandy loam on schist gravels.
50.2 ha.	Blackstone soils, good quality fine sandy loam on schist gravels and schist.
61.0 ha.	Blackstone hill soils, medium quality fine sandy loam on schist.
148.2 ha.	Total

7. APPROXIMATE COVER

14.0 ha.	Lower terrace dryland lucerne
21.0 ha.	Upper terrace dryland lucerne
16.0 ha.	Lower terrace dryland pasture
18.0 ha.	Upper terrace dryland pasture
11.0 ha.	Lower terrace dryland fallow
2.0 ha.	Upper terrace dryland fallow
54.0 ha.	Upper terrace semi improved native grazing.
10.0 ha.	Tree plantings and scrub.
2.2 ha.	Buildings and waste.
148.2 ha.	Total

8. IMPROVEMENTS

The property is fully fenced for deer farming purposes with deer shed and yards, other buildings include a woolshed covered yard complex, together with an implement shed. Stock water is reticulated to parts of the property from two separate bore sources.



The lower terraces of the property are split by the Arrow Irrigation Company Limited main supply race, no irrigation water is utilized on the property currently, but access to water could be available if required. The only practical way to utilise the irrigation water supply would be by way of spray irrigation to the lower terrace areas already established, or to be established in lucerne.

8. CURRENT LAND UTILISATION

The property is currently utilised predominantly to supply conserved feed for use on dairy farm properties at Mossburn. This is in the form of meadow hay and baleage or lucerne hay and baleage. Some grazing of young dairy stock is undertaken and some winter feed crops have been grown.

The estimated livestock carrying capacity of the property is as follows:

	ha		SU/ha	
Lucerne	14	@	10	140
Lucerne	21	@	9	189
Pasture & Fallow	27	@	8	216
Pasture & Fallow	20	@	6	120
Semi Improved native	54	@	2.5	135
Trees & Scrub	10	@	0	0
Buildings & Waste	2.2	@	0	0
Total	**148.2**			**800**

Views of upper terrace lucerne



Views of lower terraces fallow and lucerne



9. GENERAL

Small, uneconomic farming property, with an estimated livestock carrying capacity of some 800 stock units, located on the south eastern side of the Wakatipu Basin, near Arrow Junction. Currently the property is utilized for dairy support providing limited livestock grazing, but predominantly conserved feed in the form of hay and baleage.

Land that is cultivable on both terrace levels is in lucerne, pasture or fallow, the undulating upper terrace hill country semi improved native grazing, together with areas of tree plantings and some scrub. The lower terraces are very productive and produce excellent hay and baleage yields, the cultivated upper terrace area have shallower soils and are less productive in terms of hay and baleage yields.

The hill country is utilised for limited livestock grazing with young dairy stock and a very small number of sheep.

The property is currently held in three different ownerships but the farming activities are by the owners of the dairy farms at Mossburn as part of the overall dairy farm operation.

The property has a limited area that could access the Arrow Irrigation Company water supply, water rates $545 for a quota of up to 9,000 cubic metres per annum. Additional water can be purchased based on $82.50 per hectare per annum, providing 900 mm per hectare.

As the hay making operation, particularly for lucerne, has provided up to three cuts per annum, it would only be in a very dry year that significant benefits would be obtained from installing spray irrigation to the lower terrace areas currently below the water race.

The Wakatipu Basin over the past 40 years, has been extensively subdivided to provide rural lifestyle properties, this being the predominant land use from what historically was livestock farming. This property is currently held in seven separate titles, one of which has a substantial residence, there is a further substantial residence but this is held on an additional separate title.

Should you have any questions with regard to this report or require further information please do not hesitate to contact the undersigned.

Yours faithfully

APL PROPERTY QUEENSTOWN LIMITED
(Alexandra Branch)

M.F. Moore

Registered Primary Industry Management Consultant
malcolm.moore@aplproperty.co.nz