4.0 DESCRIPTION OF THE PROPOSED ACTIVITY

4.1 Overview

Resource consent is sought by Martin Lawn to now adjust the boundary between approved Lot 20 (of RM180960)[4] and Lot 33 DP 417527 and to establish a residential building platform on Lot 33.

This consent forms part of a wider reaching project of various boundary adjustments and consents (detailed in Section 3.0 of this report) to establish a more holistic, integrated and profitable farm that will enable the continued farming of areas of the site most appropriately suited for such activities and development of areas where it is considered the ability to absorb development is afforded.

4.2 Boundary Adjustment

The proposed boundary adjustment would involve realigning the contiguous boundary between Lot 20 (as approved under RM180960) and Lot 33 DP 417527 such that Lot 20 would increase in size from what is currently 34.72 hectares, to 43.29 hectares, and Lot 33 would reduce in size from 10.9 hectares down to 1.81 hectares.

The overall outcome sought by the proposed boundary adjustment is as detailed in the Proposed Boundary Adjustment Plan prepared by Aurum Survey Ltd and attached in **Appendix [D].**

The new boundary between Lot 33 and Lot 20 will be as per an existing fence line.

4.3 Residential Building Platform

It is proposed to establish a 1,000m^2 residential building platform (RBP) on the newly adjusted Lot 33, noting that Lot 33 would effectively become a 1.81 hectare fee simple allotment. The location of the proposed RBP is as shown in **Appendix [D].**

The proposed RBP, measuring 40 metres by 25 metres, will be located in the northern portion of Lot 33 and will be subject to a 5.5 metre height limit as measured from the lowest point of the proposed RBP being 648.5masl.

Access to the proposed RBP will be achieved via a new internal access which will enter the site at the southernmost boundary (over Lot 20 to which an easement is afforded) and will run more or less along the subject site's westernmost boundary, terminating at the RBP.

It is proposed to impose design controls on any future development within the RBP of which these are detailed in the Landscape Assessment attached in **Appendix [C].** In brief, the design controls proposed includes:

[4] Lot 20 is effectively the product of the subdivision of Lot 3 DP 321835 (RM180960).

- Restricting the height of all future buildings within the RBP to 5.5 metres as measured from RL 648.5. In effect this will mean that the dwelling will be sitting below the elevation of Eastburn Road due to the excavations that will be necessary to achieve a suitable platform that accords to this height limit;

- Maximum building coverage of 500m^2;

- External cladding colours to be limited to natural hues of greens, browns or greys with a Light Reflectivity Value (LRV) of between 7% and 22%;

- Roofing materials to be similarly recessive with an LRV of 6% to 20%;

- All ancillary buildings to match the principal dwelling on the site.

All of the design controls detailed in **Appendix [C]** and summarised above are proposed to form part of a consent notice to be registered on the updated RT for Lot 33.

For the avoidance of doubt, no RBP or any additional activities are proposed on Lot 20.

4.4 Landscaping

As part of the overall boundary adjustment and registration of a proposed RBP on Lot 33, a comprehensive landscaping regime is proposed. All landscaping will be implemented by the consent holder prior to the issue (or re-issue) of the RT for Lot 33.

The landscaping has been detailed in the Landscape Plan prepared by PATCH Landscape Architects Ltd and attached in **Appendix [E].** In brief, the landscaping will consist of the following:

- A row of Leyland Cypress Trees located along the northern boundary of (adjusted) Lot 33, effectively extending an existing shelterbelt;

- Indigenous planting located to the east and south of the proposed RBP, consisting of Mingimingi, Kanuka, Corokia, Flax and Tree Daisy with 1.2 metre centres.

- Existing vegetation to be retained (noting the proposed RBP is located in an area of pasture and therefore no trees will need to be removed);

- A 4,700m^2 domestic curtilage to be located around the perimeter of the proposed RBP. All domesticating elements associated with the development of the RBP will be required to be restricted to the confines of the curtilage.

All of the landscaping design controls detailed in **Appendix [C]** and summarised above are proposed to form part of a consent notice to be registered on the updated RT for Lot 33.

4.5 Servicing

4.5.1 Water

The preferred source of water take will be via an onsite bore that will service the proposed RBP only. This bore is yet to be drilled with the intention for this source of water to be confirmed prior to the issue of any updated Title.

Should the drilling of the preferred bore fail to produce an appropriate potable water supply, water can be provided via an existing 150mm bore located within the curtilage of the dwellings located on Lot 20 as shown in the location on the plan attached in **Appendix [D].**

The applicant commissioned Southdrill Limited to undertake a pump test of the bore on Lot 20 of which the results and correspondence relating to the test results are included in **Appendix [F].** The result of the pump test confirms that 1.5 litres of water per second can be drawn from the bore of which Southdrill confirms this extraction rate is sustainable.

Water quality test results prepared by Citilab, attached in **Appendix [G]** confirms that chemical levels are low enough and therefore water extracted from the bore is safe for drinking.

Should the water supply for the proposed RBP be taken from the bore on Lot 20, appropriate easements will be afforded as duly required.

It is proposed to volunteer the following condition as part of this proposal:

> "*Prior to submission of the Scheme Plan pursuant to s223, the consent holder shall provide confirmation to Queenstown Lakes District Council of an approved onsite bore detailing the rate of take and quality of the water for potable use. The bore and subsequent water take from this bore shall be supported by all necessary consents/permits as required from Otago Regional Council.*
>
> *In the event that an onsite bore is not feasible water shall be sourced from the existing bore on Lot 20 and all easements shall be provided over Lot 20 to the existing bore*".

4.5.2 Wastewater

Wastewater will be disposed of onsite via an onsite treatment and disposal system. The applicant has commissioned Mr John McCartney of Civilised Ltd to confirm

feasibility of onsite wastewater disposal of which Mr McCartney's assessment is attached in **Appendix [H].** In brief, Mr McCartney confirms that the underlying soil conditions can accommodate for an individual lot system comprised of a multi-chamber septic tank (or similar filter type tank) combined with a secondary treatment system. From here, treated material would be disposed of onsite via a disposal field with minimum dimensions of 50m^2 by 50m^2.

The provision of an onsite wastewater system is proposed to form part of a condition of consent that would in turn be implemented as a consent notice, advising future Lot owners of the requirement to implement these works prior to occupation of a dwelling.

4.5.3 Stormwater

It is proposed to simply dispose stormwater runoff to soak pits onsite to which a consent notice condition is volunteered to advise that design of soak pits will need to be undertaken at the time of construction of a residential dwelling.

4.5.4 Firefighting

It is proposed to store water onsite in plastic holding tanks containing a minimum static reserve of 45,000 Litres to be provided for firefighting. The water tanks will be required to be located within the proposed curtilage area (detailed above) and will be located adjacent to a hardstand area as required.

It is proposed to promote the provision of the firefighting tank(s) and the holding of 45,000l of water in accordance with SNZ PAS 4509:2008[5] as a consent notice condition on the updated RT for Lot 33.

4.5.5 Power and Telecom

Confirmation has been provided by Aurora confirming that a power supply can be afforded to the proposed RBP. This confirmation is attached in **Appendix [I].**

It is not intended to install any underground telecommunication facilities as part of this application. A consent notice condition will advise future lot owners that no telecommunication services have been installed and that it is the lot owner's responsibility to implement a suitable wireless / satellite telecommunications service.

4.6 Earthworks

No earthworks will form part of this application. The applicant's preference is to essentially provide a blank canvas for prospective purchasers given that future house designs can dictate the level of earthworks necessary within the RBP.

[5] By being in accordance with SNZ PAS 4509:2008, will mean that the location of the tanks will conform to all appropriate separation distances etc.

For the avoidance of doubt, no resource consent is sought for earthworks as part of this application.

5.0 DESCRIPTION OF PERMITTED ACTIVITIES

The consent authority may disregard an adverse effect of the activity if a rule or national environmental standard permits an activity with that effect.

In this environment, the establishment of a RBP and associated buildings requires resource consent and therefore the permitted baseline as it relates to future built form is not applicable.

However, it is noted that earthworks of up to 400m^3 in the Wakatipu Basin Rural Amenity Zone and 1,000m^3 in the Rural Zone are permitted.

In addition to the above, it is relevant to acknowledge that landscaping and the planting of shelterbelts is not controlled under the District Plan and therefore can be undertaken as a permitted activity.

6.0 STATUTORY CONSIDERATIONS

6.1 Queenstown Lakes District Plan

The subject sites are contained within the Rural General Zone under the Operative Queenstown Lakes District Plan.

The following resource consents are sought to authorise the proposed development:

- A **discretionary activity** pursuant to Rule 5.3.3.3(i)(b) for the identification of any building platform of not less than 70m^2 in area and not greater than 1000m^2 in area.

  In this case, the proposal involves establishing a 1000m^2 building platform on Lot 33.

- A **non-complying activity** pursuant to Rule 15.2.3.4 (i) for any subdivision which does not comply with any one or more of the Zone Subdivision Standards shall be a Non-Complying Subdivision Activity. In this instance, the proposal breaches the Zone Standard listed in Rule 15.2.6.3 (i) (bb) in relation to the standards for lot sizes for allotments created by boundary adjustment in the Rural General Zone which are:

  (i) Each of the lots must have a separate Certificate of Title; and
  (ii) Any approved residential building platform must be retained in its approved location; and
  (iii) No new residential building platforms shall be identified and approved as part of the boundary adjustment; and

(iv) There must be no change in the number of residential building platforms or residential buildings per lot; and
(v) There must be no change in the number of non-residential buildings per lot; and
(vi) The adjusted boundaries must not create non-compliance with any Part 5 Rural General Zone site and zone standards;
(vii) No additional saleable lots shall be created.

In this case, the proposal fails to comply with the provision set out in both (iii) and (v) above in that a RBP is proposed on Lot 33 and the shed located within Lot 33 will be transferred to Lot 20 upon completion of the boundary adjustment.

6.2 Proposed District Plan

Under the Proposed District Plan ("PDP"), the subject sites are located within both the Wakatipu Basin Rural Amenity Zone and Rural Zone (although the proposed RBP will be located wholly within the Wakatipu Basin Rural Amenity Zone).

Under the PDP, the proposal requires the following resource consents:

- A **non-complying activity** pursuant to Rule 27.5.19 for subdivision that does not comply with the minimum lot areas specified in Part 27.6 of the Proposed District Plan. Part 27.6 states the minimum lot area for sites within the Wakatipu Basin Rural Amenity Zone is 80ha. The proposal fails to meet this standard.

6.3 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health ("NESCS")

An aerial photograph of the site and surrounds, dated 23 February 1968 is attached in **Appendix [J]** and details that the area in which the proposed building platform to be located as an open paddock. This land use remains the case today and the applicant is not aware of any activities occurring on this piece of land other than as a paddock since at least 1968.

In addition, a search of Council's records does not result in any information that would suggest HAIL[6] activities have occurred on the parcel of land in which the activity relates.

Accordingly, the NESCS is not considered applicable in this instance.

6.4 Overall Activity Status

Overall, the proposal is assessed as a **Non-Complying Activity.**

[6] Hazardous Activities and Industries List.

7.0 ASSESSMENT OF ENVIRONMENTAL EFFECTS

The matters that must be addressed pursuant to Clauses 6 and 7 of the Schedule 4 of the Resource Management Act 1991 are detailed below.

7.1 If it is likely that the activity will result in any significant adverse effect on the environment, a description of any possible alternative locations or methods for undertaking the activity:

The proposed activity will not result in any significant adverse effects on the environment. Any effects there are, will be adequately remedied and mitigated. Alternative locations are therefore not considered necessary.

7.2 An assessment of the actual or potential effect on the environment of the proposed activity.

Introduction

Subject to Part 2 of the Resource Management Act 1991, the Council in considering this application pursuant to Section 104(B) of the Act, shall have regard to any actual or potential effects on the environment of allowing the proposed development to proceed.

In assessing any actual or potential effects on the environment of allowing the proposal to proceed, Schedule 4, Clause 7(1) of the Resource Management Act 1991 states that the following matters must be addressed.

(a) any effect on those in the neighbourhood and, where relevant, the wider community, including any social, economic, or cultural effects:
(b) any physical effect on the locality, including any landscape and visual effects:
(c) any effect on ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity:
(d) any effect on natural and physical resources having aesthetic, recreational, scientific, historical, spiritual, or cultural value, or other special value, for present or future generations:
(e) any discharge of contaminants into the environment, including any unreasonable emission of noise, and options for the treatment and disposal of contaminants:
(f) any risk to the neighbourhood, the wider community, or the environment through natural hazards or the use of hazardous substances or hazardous installations.

When considering the nature of the proposal, it is considered that the potential adverse effects of the proposed activities can be broadly categorised into the following:

- Landscape character and visual amenity;
- Location and access;

- Servicing; and
- Positive Effects.

Landscape character and visual amenity

The proposal was assessed by Mr Skelton to understand the actual and potential adverse effects on landscape character and visual amenity values. Mr Skelton's assessment is attached in **Appendix [C].**

For completeness, Mr Skelton confirms the landscape classification of the site under both the Operative and Proposed District Plan framework and has assessed the proposal in relation to the relevant assessment criteria pertaining to each. In brief, Mr Skelton confirms the site is located in the Visual Amenity Landscape under the Operative District Plan and sits within the Wakatipu Basin Rural Amenity Zone and Landscape Character Unit 20 under the Proposed District Plan[7].

Mr Skelton has identified that the site sits outside of the adjacent Crown Range Outstanding Natural Landscape (ONL) noting that the relevant planning maps[8] illustrate the ONL as running along the eastern side of Eastburn Road. Mr Skelton notes that Lot 33 and the location of the proposed RBP sits entirely outside of the ONL. This assessment is accepted.

Visibility

In terms of visibility, Mr Skelton has undertaken a site visit to ascertain the potential visibility of a future building within the proposed RBP.

In brief, Mr Skelton notes that any building on the site (within the RBP) will not be visible from the (public sections) Crown Range Road with the exception of a small section of winding road where fleeting views may result. These viewpoints relate to Images 2 and 3 as per Mr Skelton's assessment.

It is important to note that Image 2 was taken while Mr Skelton was walking along the Crown Range road and observed a break in the vegetation and leaning over a guardrail. In reality, this image/view would only be experienced for a very short period by a passenger in a vehicle heading north (away and downhill) from the site. This view would not be seen by a driver, nor would anyone travelling south (and uphill) along this specific section of the Crown Range experience this view by virtue of the obstructions attributed by the road/contours itself.

Image 3 is taken from a chain bay located on the southern-side of the road with the photograph taken at the very edge of the chain bay itself (standing over the guardrail).

Image 1 is taken from an existing lookout that is located within the confines of a private property but which is used informally and frequently by the public. The southernmost profile pole is only just visible noting that the balance of the proposed RBP is screened by the slope of the Crown Range itself.

[7] Clause 6.3.3A of the PDP states that the ONL, ONF and RCL categories and associated policies are not applicable to the Wakatipu Basin Rural Amenity Zone. This zone has its own regulatory regime.
[8] Planning Map 13D of the Proposed District Plan.

From Eastburn Road, the site will be visible but only once a driver has driven down Eastburn Road and rounds a bend in the road, approximately 180 metres north of the subject site. A future building within the RBP will be visible from Eastburn Road directly adjacent to the site however the provision of the building height restrictions and associated indigenous planting will assist with integrating the dwelling into the immediate landscape.

Mr Skelton notes that the RBP may potentially be visible from a distance over 5km near Frankton flats and even more distant viewpoints such as the Remarkables Ski Area access road.

The RBP will be substantially screened from neighbouring sites (as viewed from building platforms or existing dwellings on neighbouring sites) due to the intervening topography and vegetation (both existing and proposed). It is acknowledged that from within the paddocks of some of the neighbouring properties, particularly as it relates to the property to the north and immediately to the east, it is likely that future buildings would be visible.

Mr Skelton's assessment of the visibility of the RBP is accepted.

In paragraphs 4.19 to 4.23 of Mr Skelton's report, Mr Skelton assesses the effects of this visibility. In brief, and as already alluded to above, the visibility of the proposed RBP will be very limited and fleeting with views largely limited to a passenger in a vehicle travelling downhill on the Crown Range Road. With this in mind, it is considered that effects of the RBP will be no more than minor noting that these views will be very short (in terms of duration) and only experienced for a few seconds should a passenger happen to be looking in the direction of the RBP. Should this view be experienced, the RBP sits at the toe of the slope with the wider pastoral landscape of Lot 20 and surrounds maintaining dominance in this view.

In terms of the potential views of the RBP from the chain bay, it is expected most people would enjoy the more expansive views offered by some of the more prominent lookout points on the Crown Range Road and therefore the use of the chain bay for scenic viewing purposes would be limited. Nonetheless, people can still use this location to appreciate views (if they are not focussing on tending to their vehicles/fitting chains). From the chain bay, views of the proposed RBP are only visible from the guard rail and therefore from within the chain bay itself, the guard rail provides a visual barrier to the RBP. Nonetheless, Mr Skelton considers that the location of the site (and associated RBP) is appropriately located at the toe of the slope and maintains the wider pastoral landscape of the terrace, slotting into a consistent pattern of development that characterises Eastburn Road (when viewed from the chain bay).

Similarly, when viewed from Eastburn Road itself, views of the site from the north (when travelling down Eastburn Road) will be (in time) screened by an extension of an existing shelterbelt that Mr Skelton considers to be characteristic of an arcadian landscape. Once directly to the east of the site, a future dwelling would be visible below and in the immediate foreground of the view (from Eastburn Road) but with the view extending across the balance of Lot 20 which is that of an open, pastoral landscape noting the proposed maximum height that will be imposed on future

development. From the south, a future dwelling would be partially screened by the undulating topography of the site itself noting that a dwelling would need to be excavated into the site in order to conform to the proposed height restrictions.

From the Crown Range lookout (that is located on private land), a future dwelling may possibly be just visible depending on where within the proposed RBP this dwelling is constructed, noting that only a small portion of the southern section of the RBP is visible. Despite this, Mr Skelton considers that any visibility of a future dwelling would be seen in the foreground context of the existing buildings located at the end of Eastburn Road. In this regard, the RBP will not detract from views. Despite this assessment however, it is noted that this assessment is taken from what is essentially a private parcel of land.

Acknowledging the above, while there may be instances where the RBP and future development may be visible, such visibility is considered to be appropriate without detracting from landscape values as described by Mr Skelton.

Effects on Natural and Pastoral Character

With respect to effects on natural and pastoral character, Mr Skelton has already described the surrounding environment (particularly in terms of the terrace itself) as one that is characterised by mostly a pastoral landscape attributed to the wide-open spaces, pastoral units and shelterbelts. However, Mr Skelton also notes that rural living type development is also a feature in this landscape but would appear as a subservient element to the predominant open space.

Mr Skelton considers that the location of proposed RBP and associated domestication effects will be seen in the context of the existing nearby buildings, particularly when viewed from the Crown Range Road. Similarly, the pattern of development along Eastburn Road, attributed to the existing building platforms that are evenly spaced (along the road) and more or less adjacent to the road itself, provides an opportunity for the proposed RBP to slot into this pattern while the location of the RBP near the road maintains the open pastoral landscape that will remain within Lot 20.

In considering the above, Mr Skelton concludes that the location of the RBP along with the visual relief and integration afforded by the landscaping will result in low effects on the natural and open character of the landscape and will not appear as over-domestication. This assessment is considered logical and is accepted noting that the adjustment of the boundaries, and overall positioning of the proposed RBP provides an improved opportunity to continue to utilise Lot 20 for rural practices, contributing to the natural and open character on the immediate area.

Overall, adverse effects of the proposed development on the identified natural and pastoral character of the surrounding environment is considered to be no more than minor.

Form and Density of Development

As already alluded to earlier, Mr Skelton considers that the existing natural topography of the slope (of the Crown Range) enables the development to sit in a part of the landscape that retains the more open, pastoral landscape attributed to the paddocks within Lot 20.

Mr Skelton concludes that the location of the RBP is an area that enables development to be absorbed, due to its proximity to the toe of the slope and nearby an existing enclave of development all the while ensuring development does not introduce a density that is akin to urban.

While the development is within 500 metres of existing development, it is understood that it is the pattern of the prevailing development that allows an opportunity to integrate the proposed RBP into the receiving environment without detracting from the open/pastoral landscape of the VAL.

Relying on Mr Skelton's assessment, it is considered that the form and density of development will be appropriate in this context.

Cumulative Effects of Development on the Landscape

Mr Skelton considers that the proposed development can be appropriately absorbed into the existing enclave of development that characterises the eastern portion of the Crown Terrace (near the toe of the slope) whilst retaining the pastoral, open space attributed to Lot 20.

While it is acknowledged that the proposal introduces an additional residential activity into the wider landscape, Mr Skelton's assessment is accepted in that it is recognised that there is an existing pattern of development that enables a logical insertion of an additional dwelling while maintaining open space of the existing (and currently farmed) paddocks within Lot 20.

Acknowledging Mr Skelton's assessment, it is considered that the proposal will not lead to adverse cumulative effects on the landscape.

Rural Amenities

Mr Skelton considers rural amenities are maintained through the retention of open paddocks, maintenance of fence lines and boundaries along with a RBP that will sit beneath the road allowing views across the pastoral landscape to be maintained.

It is considered that the realignment of (legal) boundaries contributes to rural amenities through the establishment of a coherent and consolidated landholding which maintains Lot 20 to be holistically farmed.

The provision of a RBP (and associated domestication) is not inappropriate in a rural setting and in particular, Mr Skelton recognises that the Crown Terrace has pockets of residential living activities located in amongst the open pastoral landscape, to which this proposal is considered to reflect.

While Lot 33 will be more akin to rural-lifestyle living given the allotment size, this density is considered reflective of the surrounding character while recognising that the boundary adjustment results in an enlargement of Lot 20 that will continue to contribute to the rural amenity values of the area.

In considering the above, it is considered that the proposal will not detract from rural amenity values of the surrounding area.

Location and access

The site will be accessed via a new driveway that will connect to an existing vehicle crossing located along the site's southern boundary. A right of way will safeguard access to Lot 33 over Lot 20 as detailed within the attached Scheme Plan.

The access will be constructed in accordance to Council's standards with a minimum formation of 150mm compacted AP40 with a minimum carriageway width of 3.5 metres. Adhering to these design standards, it is considered the access will provide appropriate vehicular access.

Mr Skelton has considered the location of the access as being logical and appropriate in that the alignment responds to the contours and existing boundary (fence line), resulting in an outcome that will not detract from visual amenity values.

Acknowledging the above, it is considered that the proposed RBP will have suitable vehicular access.

Servicing

Water supply to the site will be achieved via one of two probable means; the preferred source of water will be source from a new bore to be drilled onsite. If this bore fails to produce the required water take, the applicant has an existing bore located within the curtilage of the existing dwelling which can provide the appropriate supply of water via an easement. It is considered that the provision of a condition that requires either option will appropriately ensure a suitable water supply can be provided prior to the approval of the survey plan pursuant to s223 of the RMA.

As generally the case with rural type developments, it is proposed to provide onsite storage tanks to provide for appropriate water storage for firefighting purposes. The provision of a Consent Notice requiring future owners to provide for a water tank that accords to the appropriate firefighting standards will suitably provide for firefighting supply.

Stormwater will be disposed of via an onsite soak pit. Such an approach is considered appropriate in this environment where all stormwater runoff can be suitably captured and disposed of onsite.

With respect to wastewater disposal, the applicant has engaged Mr John McCartney of Civilised Ltd to confirm the suitability of the site for onsite wastewater treatment and disposal. Mr McCartney's findings are contained within his assessment attached in

Appendix [H]. In brief, Mr McCartney confirms that the subsurface conditions are considered to be appropriate to accommodate a future residential activity with the provision of an individual lot system, secondary treatment and associated disposal field. It is proposed that a Consent Notice be imposed on the updated RT such that future prospective owners are aware of their obligation to install a suitable onsite wastewater system that accords to the applicable standards. Relying on Mr McCartney's assessment, it is considered that future development within the proposed RBP will result in no more than minor adverse environmental effects.

Confirmation has been provided by Aurora confirming the feasibility to provide power to the proposed RBP which is not unexpected noting the level of development in the vicinity of the area already. As such, it is considered that a future residential dwelling can be appropriately serviced for power.

Positive Effects

With respect to positive effects, these effects stems from recognition of the proposal providing for additional residential accommodation without compromising the overall visual and landscape values of the surrounding environment as assessed by Mr Skelton.

In addition, the proposal realigns (legal) boundaries such that Lot 20 results in an allotment of over 40 hectares that will continue to provide opportunities for productive pastoral use while locating additional residential activity close to an existing road network and consistent with an existing pattern of built development while minimising loss of land otherwise suited for farming.

The indigenous vegetation planting will contribute to ecological values more so than that of pasture.

Conclusion

Overall, it is considered that the proposal can be appropriately provided for in this landscape without resulting in an unacceptable level of adverse effects.

7.3 If the activity includes the use of hazardous substances and installations, an assessment of any risks to the environment which are likely to arise from such use

N/A

7.4 If the activity includes the discharge of any contaminant, a description of:

1. The nature of the discharge and the sensitivity of the proposed receiving environment to adverse effects; and

2. Any possible alternative methods of discharge, including discharge into any other receiving environment.

N/A

7.5 A description of the mitigation measures (including safeguards and contingency plans where relevant) to be undertaken to help prevent or reduce actual and potential effects:

The appropriateness of the proposed RBP in the receiving environment is attributed to the design controls which are recommended in the application including a restriction on the maximum height limit for future dwellings and the use of recessive colours and materials (for the dwelling and other structures such as water tanks). With these controls to be implemented via a Consent Notice condition, future development will be undertaken in a manner anticipated through the assessment of this application.

Inherent to the application is the provision of landscape planting both in the form of indigenous context planting around the proposed RBP and an extension to the shelterbelt along the northern boundary of the subject site. The context planting will contribute to the integration of future dwelling into the landscape whereas the shelterbelt planting will provide visual relief to future development when travelling south along Eastburn Road.

Mr McCartney has recommended conditions of consent that will be imposed as a Consent Notice condition to ensure an appropriate onsite wastewater system is established prior to occupation of a residential dwelling to ensure adverse effects on the environment (associated with wastewater disposal) are adequately mitigated.

7.6 Identification of the persons affected by the activity, any consultation undertaken, and any response to the views of any person consulted:

7.6.1 Written Approvals

Written approval has been obtained from the following persons, of which a copy of the written approval is attached in **Appendix [K].** In accordance with s95E(3)(a) of the RMA, a person who has provided written approval is not an affected person in relation to an application for a resource consent.

Written Approval Received by:	Property:
Crown Range Holdings Limited	Current owners of Lot 3 DP 321835 (Lot 20 of RM180960)

7.6.2 Effects on persons

Adverse effects of the proposed development on person(s) are considered to be less than minor for the for the following reasons:

- The property to the immediate north of the subject site (Lot 27 DP 417527) is characterised by a generally rolling pastoral landscape consisting of gullies, and creeks, along with human influences such as maintained paddocks and

fence lines. The existing shelterbelt located on the subject site's northern boundary provides a physical demarcation of the boundary along with a degree of visual screening.

There are no dwellings visible on the adjoining site although it is noted that there is a standalone land parcel located approximately 200 metres directly to the north of the subject site being Lot 3 DP 336049 and contains a consented RBP. This site is currently subject to a resource application (RM200017) to construct a residential dwelling within the consented RBP. However, due to the rolling nature of the underlying topography, this dwelling and the proposed RBP are unlikely to be visible from each other with the exception of the roof (of the dwelling proposed under RM200017).

Overall, it is considered that the provision of a RBP and associated domestication of Lot 33 will not result in any adverse effects on residential amenities for the properties to the north by virtue of the separation distances afforded, and the screening provided by the undulating landform itself and subsequent proposed shelterbelt landscaping.

In terms of the boundary adjustment, this is not considered to result in any material effects over and above what is already experienced by the neighbouring properties given Lot 20 will continue to be farmed as existing.

The provision of the proposed RBP is not considered to result in reverse sensitivity effects on the ability for Lot 27 DP 417527 to be utilised for farming purposes noting that (clusters) residential activities are commonplace on the Crown Terrace scattered in among working rural allotments with the inherent rural amenity contributing to the appeal of the proposed residential activities.

The proposal would introduce one additional set of vehicle movements associated with the proposed RBP and subsequent residential domestication. It is considered that the scale of such activity will not result in any discernible traffic effects over and above what would be presently experienced.

- To the south-east of the subject site are a number of buildings and dwellings on what is a 1,385 hectare allotment that extends up to the east towards the Crown Range Lookout. The nearest dwelling on this site will be over 300 metres away noting that the dwelling on this property sits within a reasonably defined enclave of existing buildings on both the applicant's property but also adjacent properties.

  The provision of a RBP on Lot 33 is not considered to generate adverse effects on the amenity values for this property noting that the development of Lot 33 will appear as a consistent component of the prevailing character of built form along Eastburn Road.

- A number of residential building platforms have been established and authorised further to the south of Preservation Lane and would experience the proposed development insofar as they bypass the site (when heading to or from the Crown Range Road). However, it is considered that future development within the proposed RBP will sit low (and beneath Eastburn Road) in the immediate foreground such that the proposal will maintain views across the pastoral landscape that is retained within Lot 20. Nonetheless, the presence of a future dwelling is considered to be consistent with the pattern of development that users of Eastburn Road will experience noting the existing and consented level of development already present.

Acknowledging the above, it is considered that no person will be unduly adversely affected by the proposal.

7.7 If the scale or significance of the activity's effects are such that monitoring is required, a description of how and by whom the effects will be monitored if the activity is approved.

No monitoring is required other than standard conditions of consent.

7.8 If the activity will, or is likely to, have adverse effects that are more than minor on the exercise of a protected customary right, a description of possible alternative locations or methods for the exercise of the activity (unless written approval for the activity is given by the protected customary rights group).

The proposed activity will have no effect on any customary rights.

8.0 SECTION 95 NOTIFICATION

8.1 Public Notification

Step 1 – Mandatory public notification

- We are not requesting public notification of the application.
- Provided a request is reasonable, we are unlikely to refuse to provide further information or refuse the commissioning of a report under Section 92(2)(b) of the Act.
- The application does not seek to exchange recreation reserve land under section 15AA of the Reserves Act 1977.

Accordingly, mandatory public notification of the application is not required.

Step 2 – Public notification precluded

- Public notification is not precluded by any rule or national environmental standard.
- The proposal is not a controlled activity, a restricted discretionary/discretionary subdivision or a residential activity, or a boundary activity as defined by section 87AAB.
- The proposal is not a prescribed activity.

Accordingly, public notification of the application is not precluded.

Step 3 – If not precluded by Step 2, public notification is required in certain circumstances

- Public notification of this application is not specifically required under a rule or national environmental standard.

A consent authority must publicly notify an application if it decides under s95D(8)(b) that the activity will have or is likely to have adverse effects on the environment that are more than minor. An assessment in this respect is made in Section 7 above.

Step 4 - public notification in special circumstances

- In this case it is considered that no special circumstances exist.

8.2 Limited Notification

Section 95B(1) requires a decision whether there are any affected persons. The following steps set out in this section, in the order given, are used to determine whether the Council should limited notify the application, if the application is not to be publicly notified.

Step 1: certain affected groups and affected persons must be notified

Limited notification is not required under Step 1 as the proposal does not affect customary rights groups, customary marine title groups nor is it on, adjacent to or may affect land subject to a statutory acknowledgement.

Step 2: if not required by step 1, limited notification precluded in certain circumstances

- Limited notification is not precluded under Step 2 as the proposal is not subject to a rule in the District Plan or NES that precludes notification.
- Limited notification is not precluded under Step 2 as the proposal is not a controlled activity and is not a prescribed activity.

Step 3: if not precluded by step 2, certain other affected persons must be notified

- Limited notification is not precluded under Step 3 as the proposal is not a boundary activity where the owner of an infringed boundary has provided their approval, and it is not a prescribed activity.
- Limited notification is not precluded under Step 3 as the proposal falls into the 'any other *activity*' category and the effects of the proposal on persons are assessed in section 7.6 above.

9.0 SECTION 104 (1)(b) ASSESSMENT

Clause 2(1)(g) of Schedule 4 of the Resource Management Act 1991 requires an assessment against any relevant planning documents that are referred to in Section 104(1)(b) of this legislation. Such documents include:

- A national environmental standard
- Other regulations
- A national policy statement
- A New Zealand coastal policy statement
- A regional policy statement or proposed regional policy statement
- A plan or proposed plan

9.1 Operative District Plan

The relevant objectives and policies of the Operative District Plan are considered the following:

Section 4 – District Wide Issues

Objective:
Subdivision, use and development being undertaken in the District in a manner which avoids, remedies or mitigates adverse effects on landscape and visual amenity values.

Policies:

1. Future Development

(a) To avoid, remedy or mitigate the adverse effects of development and/or subdivision in those areas of the District where the landscape and visual amenity values are vulnerable to degradation.

(b) To encourage development and/or subdivision to occur in those areas of the District with greater potential to absorb change without detraction from landscape and visual amenity values.

(c) To ensure subdivision and/or development harmonises with local topography and ecological systems and other nature conservation values as far as possible.

As detailed throughout this assessment, the proposal involves realigning boundaries and the proposal of a RBP that takes account of the landscape values of the surrounding environment. In this case, Mr Skelton details the location of the RBP as being appropriately positioned so to maintain the vast open and pastoral landscape that will be retained on Lot 20. In effect, the proposal will not detract from the landscape values of the VAL in which it sits nor compromise the values attributed to the adjacent Crown Range ONL.

Mr Skelton concludes that the location of the RBP provides an appropriate ability to absorb development due to the existing pattern of development along and at the end of Eastburn Road.

The proposal involves the provision of landscaping to reflect the existing pattern of shelterbelts all the while providing for indigenous context planting that contributes to nature conservation values and integration with the adjacent ONL.

Overall, the proposal is considered not contrary to these provisions.

4. Visual Amenity Landscapes

(a) To avoid, remedy or mitigate the adverse effects of subdivision and development on the visual amenity landscapes which are:

- *highly visible from public places and other places which are frequented by members of the public generally (except any trail as defined in this Plan); and*
- *visible from public roads.*

(b) To mitigate loss of or enhance natural character by appropriate planting and landscaping.

(c) To discourage linear tree planting along roads as a method of achieving (a) or (b) above.

Mr Skelton has considered the potential effects of the proposed development on the VAL noting that the positioning of the RBP at the toe of the Crown Range slope and near (adjacent to) Eastburn Road will maintain landscape values across the terrace.

When considering clause (a), the key terms referred to in this policy includes whether a development is "highly visible" from public places frequented by the public. The assessment by Mr Skelton considers visual effects from sections of the Crown Range road although it is recognised that in practice, these views will be either largely fleeting (image 2) or seen in the context of existing development (from the chain bay).

Views from the Crown Range lookout are achieved on private property. Nonetheless, the location of the RBP is predominantly screened by the toe of the Crown Range slope and forms part of an existing enclave of structures in the immediate foreground.

While a degree of landscape mitigation is proposed, this is considered appropriate to the environment in which it sits by virtue of the prevailing character of shelterbelts (as it relates to the proposed Cypress Leylands) and the indigenous context planting that complements the adjacent ONL. As such, linear planting in this context is considered acceptable.

Overall, the proposal is considered not contrary to the above.

8. Avoiding Cumulative Degradation

In applying the policies above the Council's policy is:

(a) to ensure that the density of subdivision and development does not increase to a point where the benefits of further planting and building are outweighed by

the adverse effect on landscape values of over domestication of the landscape.

(b) to encourage comprehensive and sympathetic development of rural areas.

The proposed development is considered to be sympathetic to that of the rural environment in which it sits noting the positioning of the RBP will maintain pastoral landscape values as well as utilising existing boundary alignments.

The proposed RBP represents a logical insertion into an existing pattern of development and therefore the proposal is not considered to result in an adverse level of cumulative effects that would result in the landscape appearing as over-domesticated. In this regard, the proposal is considered not contrary to this provision.

9. Structures

To preserve the visual coherence of:

(a) outstanding natural landscapes and features and visual amenity landscapes by:

- *encouraging structures which are in harmony with the line and form of the landscape;*
- *avoiding, remedying or mitigating any adverse effects of structures on the skyline, ridges and prominent slopes and hilltops;*
- *encouraging the colour of buildings and structures to complement the dominant colours in the landscape;*
- *encouraging placement of structures in locations where they are in harmony with the landscape;*
- *promoting the use of local, natural materials in construction.*

(b) visual amenity landscapes

- *by screening structures from roads and other public places by vegetation whenever possible to maintain and enhance the naturalness of the environment; and*

(c) All rural landscapes by

- *providing for greater development setbacks from public roads to maintain and enhance amenity values associated with the views from public roads.*

Mr Skelton has detailed the appropriateness of the proposed development on the site insofar as the design controls will ensure a development that will sit low and recessively in the landscape without breaching the skyline of the adjacent Crown Range ONL.

The design controls will restrict matters such as height, colours and materials along with minimising building coverage to ensure that the resulting built form does not detract from the landscape values of the surrounding landscape.

Mr Skelton has promoted the provision of landscaping along the northern boundary through extending the existing shelterbelt which in time, will provide visual relief to future dwellings when travelling south along Eastburn Road, maintaining natural character although it is equally acknowledged that Eastburn Road is also characterised by built form attributed to existing residential activities.

Overall, the proposal is considered not contrary to these provisions.

17. Land Use

To encourage land use in a manner which minimises adverse effects on the open character and visual coherence of the landscape.

While the proposal involves the establishment of an additional residential dwelling, there will be no increase in saleable allotments. Rather, the boundaries between the two allotments will be realigned enhancing Lot 20 as a larger rural landholding, maintaining existing paddocks and fence lines.

Lot 33, while being reduced in size to an allotment comparable to a smaller rural lifestyle allotment, is considered to be an appropriate insertion into the landscape that affords a level of absorption without compromising the open character or visual coherence of the landscape.

Section 5 – Rural Areas

Objective 1 - Character and Landscape Value

To protect the character and landscape value of the rural area by promoting sustainable management of natural and physical resources and the control of adverse effects caused through inappropriate activities.

Policy 1.1 - Consider fully the district wide landscape objectives and policies when considering subdivision, use and development in the Rural General Zone.

Policy 1.4 - Ensure activities not based on the rural resources of the area occur only where the character of the rural area will not be adversely impacted.

Policy 1.6 - Avoid, remedy or mitigate adverse effects of development on the landscape values of the District.

Policy 1.7 - Preserve the visual coherence of the landscape by ensuring all structures are to be located in areas with the potential to absorb change.

Policy 1.8 - Avoid remedy or mitigate the adverse effects of the location of structures and water tanks on skylines, ridges, hills and prominent slopes.

The objective and associated policies relating to Character and Landscape Values primarily centre around maintaining the values of the rural area through controlling adverse effects caused by inappropriate activities.

The primary values associated with the subject site and surrounds includes, among others, the landscape values attributed to the existing rural activities along with the naturalness and openness associated with the existing paddocks and fields.

When considering the assessment undertaken by Mr Skelton, it is considered that the proposed RBP in conjunction with the realignment of the allotment boundaries will not degrade the openness of the landscape to an inappropriate level noting that future dwellings will be incorporated into an existing pattern, sitting low in the landscape beneath (and in close proximity) to Eastburn Road, retaining existing pastoral character.

The retention of the open space attributed to Lot 20 will maintain rural amenity values where farming practices will not be compromised by the proposed activities.

Objective 3 - Rural Amenity

Avoiding, remedying or mitigating adverse effects of activities on rural amenity.

Policy 3.1 - Recognise permitted activities in rural areas may result in effects such as noise, dust and traffic generation, which will be noticeable to residents in the rural areas.

Policy 3.2 - Ensure a wide range of rural land uses and land management practices can be undertaken in the rural areas without increased potential for the loss of rural amenity values.

Policy 3.3 - To avoid, remedy or mitigate adverse effects of activities located in rural areas.

Policy 3.5 - Ensure residential dwellings are setback from property boundaries, so as to avoid or mitigate adverse effects of activities on neighbouring properties.

Similar to the discussion above, Objective 3 and associated policies are directed towards avoiding, remedying or mitigating adverse effects on rural amenity.

As discussed by Mr Skelton, the retention of the open space and appropriate position of the proposed RBP will maintain landscape values which in turn will maintain rural amenity. The proposed boundary adjustment is considered to be appropriate in that it maintains logical boundaries and fence lines all the while enabling continued use of Lot 20 for farming practices.

The proposal is not considered to compromise the ability for rural land practices to be undertaken in the vicinity noting that the proposed RBP will be inserted in an area that is already subject to a level of domestication. For these reasons, the proposal is considered to maintain rural amenity values.

Overall, the proposal is considered to be not contrary to the relevant provisions of the District Plan.

9.2 Proposed District Plan

The Queenstown Lakes District Council notified the Proposed District Plan on 26 August 2015. In considering the various provisions of the PDP, the following are considered most applicable:

> *Objective 24.2.1 – Landscape character and visual amenity values in the Wakatipu Basin Rural Amenity Zone are maintained or enhanced.*
>
> *Policy 24.2.1.1 – Require an 80 hectare minimum net site area be maintained within the Wakatipu Basin Rural Amenity Zone outside of the Precinct.*

While the sites subject to this application are already established well below 80 hectares, the proposal is considered to go some way in providing for the intent of this policy, being the provision of larger land holdings that contribute to the Rural Amenity zone, both in terms of landscape values but also rural practices.

It is accepted that the proposal results in an allotment of some 1.81 hectares however this density is considered consistent with the prevailing density located along Eastburn Road noting the provision of similar, if not smaller allotments to the immediate north of the subject site.

Nonetheless, the establishment of this Lot will not increase the number of land parcels in the immediate area but rather creates an allotment (Lot 33) that can appropriately accommodate a residential activity (in terms of having minimal effects on landscape values and the ability to service the lots) while consolidating the balance of the landholding with Lot 20 to establish a larger rural landholding.

Overall, while the proposal is not considered to be entirely consistent with Policy 24.2.1.1, the proposal is not considered to be inherently contrary.

> *Policy 24.2.1.3 – Ensure that subdivision and development maintains or enhances the landscape character and visual amenity values identified in Schedule 24.8 – Landscape Character Units.*

Mr Skelton has considered the proposed development in relation to the relevant Landscape Character Unit (LCU) pertaining to the subject sites, being LCU 20. Mr Skelton notes that LCU 20 describes the land use as, '*predominantly in rural production with loose groupings of rural residential development throughout the unit.*'

Mr Skelton, in considering the relevant components on LCU 20 including effects associated with land use, visibility/prominence, enclosure/openness, coherence, naturalness and sense of place generally concludes that the proposal does not detract from these values for the various reasons detailed above.

Acknowledging Mr Skelton's assessment, it is considered the proposal is consistent with LCU 20 and therefore is not contrary to Policy 24.2.1.3.

> *Objective 27.2.2- Subdivision design achieves benefits for the subdivider, future residents and the community.*

The proposed boundary adjustment will enable the applicant to enhance the overall land holding size of Lot 20 for farming purposes while establishing a smaller, manageable allotment that can be utilised for residential purposes for future residents. The proposal is considered to be consistent with Objective 27.2.2.

> *Objective 27.2.4 - Natural features, indigenous biodiversity and heritage values are identified, incorporated and enhanced within subdivision design.*
>
> *Policy 27.2.4.1 Incorporate existing and planned waterways and vegetation into the design of subdivision, transport corridors and open spaces where that will maintain or enhance biodiversity, riparian and amenity values.*

With respect to Objective 27.2.4 and associated Policy 27.2.4.1, the proposed subdivision and positioning of the proposed RBP takes account prevailing natural features, landforms and fence lines to utilise a parcel of land that is presently underutilised in the farming sense.

Proposed landscape mitigation has been considered in recognition of the existing shelterbelt to result in a logical and consistent means of visual screening that is characteristic of a pastoral setting.

Indigenous contextual planting is considered to be appropriate in the context of the adjacent ONL and will provide a small degree of positive biodiversity effects.

The proposed access will follow an existing contour/fence line that is considered to be logical in this setting and therefore will not detract from amenity values.

> *Policy 27.2.5.7 - Ensure water supplies are of a sufficient capacity, including fire fighting requirements, and of a potable standard, for the anticipated land uses on each lot or development.*

While it is intended to investigate an onsite water supply option, it has been demonstrated that the existing bore located within the confines of Lot 20 has the appropriate capacity and quality to provide for potable water supply. It is considered that the provision of a condition that requires either an onsite water supply or alternative access (via easement) to the existing water bore will provide sufficient means and access to potable water.

A firefighting tank will be required to provide for the provision of 45,000 Litres of water storage within the proposed curtilage area. It is proposed that a standard condition of consent to be imposed as a consent notice will provide sufficient confidence that appropriate provision for firefighting supply will be implemented at the time of construction of a dwelling.

> *Policy 27.2.5.14 - Ensure appropriate sewage treatment and disposal by having regard to:*
>
> *a. the method of sewage treatment and disposal;*

b. the capacity of, and impacts on, the existing reticulated sewage treatment and disposal system;
c. the location, capacity, construction and environmental effects of the proposed sewage treatment and disposal system.

The applicant has engaged with Mr McCartney to undertake a site and soils assessment to confirm the feasibility of the site for onsite wastewater treatment and disposal.

Mr McCartney confirms that the site has the capacity to accommodate onsite wastewater disposal from a single residential dwelling without resulting in adverse environmental effects. As such, it is considered that the proposal is consistent with Policy 27.2.5.14.

Policy 27.2.5.17 - Ensure that services, shared access and public access is identified and managed by the appropriate easement provisions.

All appropriate easements will be provided to ensure vehicular access and (if required) water access over Lot 20 are provided afforded to the proposed RBP. It is anticipated that standard conditions of consent will appropriately capture such requirements.

10.0 AN ASSESSMENT OF THE ACTIVITY AGAINST MATTERS IN PART 2

10.1 Section 5

The purpose of the Act as stated in s5(1) of the RMA is, "to promote the sustainable management of natural and physical resources".

Section 5(2) of the Act defines "sustainable management" as:

> *... 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."*

As detailed throughout this assessment, it is considered that the development represents an appropriate use of the site in that it enables for the establishment of a RBP within an area that can absorbed such development while maintaining the landscape values attributed to the open paddocks of Lot 20.

The proposed boundary adjustment will continue to enable Lot 20 to farmed in a holistic manner.

As detailed throughout this report and supplementary expert assessments, the adverse effects on the environment are considered to be appropriately mitigated.

The proposal is considered to represent sustainable management where adverse effects on the environment have been appropriately mitigated whilst providing for the social, cultural and economic wellbeing of the community.

10.2 Section 6

Section 6 relates to matters of national importance. Of specific relevance to the subject application are the following matters:

> *"(b) the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:*
>
> *(c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:*

All of these matters have been addressed in detail above, however in summary:

- The proposed RBP has been positioned at the toe of the Crown Range hillside and within an existing enclave of built form that maintains the open space characteristics of the Crown Terrace whilst maintaining the landscape values attributed to the ONL. Relying on this assessment, it is considered that the proposal conforms with s6(b) of the RMA.

- While the site does not contain any 'designated' areas of significant indigenous vegetation, the proposal will involve the provision of indigenous vegetation that will contribute to the remnants of indigenous vegetation of the ONL, contributing to positive ecological outcomes that are otherwise not present. Overall, the proposal is considered not contrary to the provisions of s6(c).

10.3 Section 7

Section 7 relates to 'other matters'. The matters of relevance are considered to be as follows:

> *(b) the efficient use and development of natural and physical resources*
> *(c) the maintenance and enhancement of amenity values*

Again, all of these matters have been addressed in the above assessment in detail, however in summary:

- The proposal utilises a parcel of land that is identified as being able to accommodate residential development without compromising from landscape values or rural amenity. The associated boundary adjustment contains to allow the balance of the land (Lot 20) for productive purpose. Overall, the proposal is considered to be an efficient use of the land resource.

- As assessed by Mr Skelton, the proposed RBP will be positioned near the toe of the Crown Range and on the edge of the prevailing open space of the Crown Terrace such that future domestication will not detract from identified amenity values. Similarly, a future dwelling will be seen in the context of an existing environment of built form, resulting in what is considered to be a logical insertion into the receiving environment. Overall, the proposal is considered consistent with s7(c) of the RMA.

10.4 Section 8

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi.

The proposal is not considered to be at odds with the principles of the Treaty of Waitangi.

10.5 Conclusion

When taking a balanced assessment of the proposal, it is considered that the proposal will not generate an inappropriate degree of adverse effects on the environment all the while generating positive effects in the form of providing for social, cultural and economic wellbeing.

Consequently, the proposal is considered to achieve Part 2 of the Act.

11.0 CONCLUSION

Resource consent is sought to undertake a boundary adjustment subdivision and to establish a residential building platform on the site at Eastburn Road, Arrow Junction, consisting of the following legal land parcels:

- Lot 33 Deposited Plan 417527 as held in RT 469939;
- Lot 2 Deposited Plan 321835 as held in RT 87260; and
- Lot 3 DP 321835 held in RT 87261.

Overall the activity is assessed as a **Non-complying Activity.**

As a non-complying activity, consideration of s104D of the Resource Management Act 1991 is required.

The actual and potential effects on the environment have been outlined in section 7 of this report where it is concluded that the proposed activity is not likely to have any adverse effects on the environment that are more than minor.

The proposal is considered consistent with the relevant objectives and policies of both the District Plan and the Proposed District Plan and meets the purpose and principles of the Resource Management Act 1991.

Noting the above, the application is considered to meet the requirements under s104D.

APPENDIX 2 QLDC ENGINEERING REPORT – CAM JONES

QUEENSTOWN LAKES DISTRICT COUNCIL

www.qldc.govt.nz

ENGINEERING REPORT

TO: **Jake Neaves**

FROM: **Cameron Jones**

DATE: **12/11/2020**

APPLICATION DETAILS	
REFERENCE	**RM200240**
APPLICANT	**Martin Lawn**
APPLICATION TYPE & DESCRIPTION	Subdivision consent is sought to undertake a boundary adjustment between Lot 20 RM180960 and Lot 33 DP 417527. Land use consent is sought to identify a residential building platform.
ADDRESS	Eastburn Road, Crown Terrace
ZONING	ODP: Rural General PDP: Wakatipu Basin Rural Amenity Zone
LEGAL DESCRIPTION	Lot 33 DP 417527 Lots 2 & 3 DP 321835
SITE AREA	107.36 ha
ACTIVITY STATUS	Non-complying

Application	**Reference Documents**	Documents provided with consent application.
	Previous Relevant Consents	RM160880 & RM171236 (previous subdivision and variation; not given effect to). RM161179 & RM190413 (previous subdivision and variation). RM180960 (boundary adjustment; not given effect to).
	Date of site visit	27/07/2020

Comments		
	Existing Use	Pastoral land with associated buildings.
	Neighbours	Eastburn Road to the east; otherwise surrounded by pastoral land.
	Topography/Aspect	Proposed Lot 33 is gently to moderately sloping down towards the west.

Location Diagram

Scheme Plan

ENGINEERING			COMMENTS	Condition
	Access	Means of Access	**Access** Access to the building platform is to be formed from an existing vehicle crossing at the northern corner of Lot 20 RM180960, and will require a short section of right of way over Lot 20 in favour of Lot 33. I am satisfied that forming an access which complies with Council's requirements for width and gradient will be easily achieved. I recommend a condition that the access be formed in accordance with Figure E1 of QLDC's '*Land Development and Subdivision Code of Practice'* prior to 224c certification / registration of the building platform.	**X**
		Vehicle crossing	**Vehicle crossings** Access to the right of way discussed above will be via an existing vehicle crossing. I am satisfied that the vehicle crossing complies with District Plan requirements for sight distances, length, and break over angles. As Eastburn Road has been recently sealed, I recommend a condition that the crossing be sealed prior to 224c certification / registration of the building platform.	**X**

ENGINEERING			COMMENTS	Condition
EARTHWORKS	Extent	Description	Earthworks as required to provide services and access to the proposed building platform.	
		Cut / Fill Volume	Not specified, but likely to be below the 400m^3 permitted in the Wakatipu Basin zone.	
		Total Volume		
		Area Exposed	Not specified.	
		Max Height Cut/Fill	Not specified, but likely to be within permitted limits.	
		Prox. to Boundary	Based on the minor nature of the works required, I am satisfied that they can be contained within the site. Regardless, I recommend a condition in this regard.	
	Stability	Geotech assessment by	GeoSolve Limited	
		Report reference	'*Geotechnical Report. Lot 33 DP 417527, 106 Eastburn Road, Queenstown.'* GeoSolve ref 200605, dated 20/10/2020.	
		Report Comment	The report presents the results of two test pits and Scala penetrometer tests undertaken in the vicinity of the proposed building platform. Recommendations are made for undertaking earthworks, and designing foundations and retaining walls. An assessment of the risk due to natural hazards is included, and is discussed in further detail in the relevant section herein. Given the minor nature of the works proposed, I make no recommendations regarding supervision of works.	
		Rock breaking	Not anticipated.	
		Rock blasting		
		Preconstruction survey	Not required.	
		Retaining	None proposed, nor anticipated.	
		Recommendations on cut/batter slopes	As per the GeoSolve Limited report.	**X**
		Fill certification/specific foundation design required	Not required.	

		Engineers supervision	Not required.	
		Uncertified fill covenant	Not required.	
		Geotechnical Completion report / Schedule 2a Certificate	Not required, as the GeoSolve report does not raise any geotechnical concerns regarding the location of the building platform.	
		Clean fill only	Not required.	
	Site Management	**Report reference**	None provided with the application.	
		Specific sedimentation management	I recommend that the planner include conditions to ensure that the works are undertaken in accordance with QLDC's '*Guidelines for Environmental Management Plans.'*	
		Specific stormwater management		
		Neighbours	I am satisfied that the earthworks are feasible and no adverse effects will result on neighbouring sites.	
		Traffic management	Required for works affecting the road reserve.	**X**
		Construction crossing	Not required.	
		Revegetation	An appropriate condition is recommended to ensure all exposed areas are stabilised or re-vegetated at the completion of earthworks.	**X**

ENGINEERING			**COMMENTS**	**Condition**
SERVICES	**Existing Services**		Lot 33 is currently unserviced.	
	Water	**Potable**	The applicant's preference is to install a new bore on Lot 33, though no details as to what quantity and quality of water can be produced has been provided. In the event that the above fails to be an appropriate water supply, the applicant proposes to utilise the bore already constructed on Lot 20 (currently utilised for several approved lots). The applicant has provided bore logs demonstrating that the existing bore can produce an adequate quantity of water. The applicant has provided laboratory test results demonstrating that the water supply complies with the NZ Drinking Water Standards, although the water is shown to be hard. While this is not a health concern, I recommend an advice note recommending treatment to prevent scale build-up in pipes and appliances and detergent deficiency. The applicant does not hold a resource consent from the Otago Regional Council for the existing water take, so their take is restricted to the permitted volume of 25,000 litres per day. The existing residential unit plus the 5 cabins being considered under RM200241 plus the proposed building platform will require a total water supply of 14,700 litres per day. No details regarding the quantity of water required for irrigation of the proposed planting for both this consent and RM200241 has been provided, but a significant number of plants are proposed so the required water volumes could be quite high. **I recommend that the planner address the potential for failure of the planting plan due to lack of water in their report.**	**X**

		Potable, cont.	I recommend that the detailed design of the water supply system be provided to Council for Engineering Acceptance prior to the commencement of works, including confirmation that adequate potable water can be produced. I recommend a condition that at least 2,100 litres of water be provided to the building platform prior to registration.	**X**
		Fire-fighting	As there are no fire hydrants available in the area, the applicant proposes the provision of a 45,000 litre static firefighting water reserve, in accordance with the requirements of SNZ PAS 4509:2008. I recommend a consent notice condition on Lot 33 in this regard. The existing residential unit on Lot 20 has been provided with a static firefighting water reserve and a firefighting coupling and I make no recommendations in this regard.	**X**
	Effluent Disposal		As there is no wastewater reticulation in the area, on-site treatment and disposal is required. The applicant has provided a site and soils assessment prepared by Civilised Limited demonstrating that this is feasible, in accordance with the requirements of AS/NZS 1547:2012. I recommend a consent notice condition in this regard. I am satisfied that the wastewater treatment and disposal system for the existing residential unit would have been assessed at the time it was installed and I make no recommendations in this regard.	**X**
	Stormwater		As there is no stormwater reticulation in the area, on-site disposal is required. Given the size of the site, I am satisfied that this will be easily achieved. I am satisfied that the specific design of the stormwater disposal system used will be assessed as part of the Building Consent process and I make no recommendations in this regard. I am satisfied that the stormwater disposal system for the existing residential unit would have been assessed at the time it was installed and I make no recommendations in this regard.	
	Power & Telecoms		The applicant has provided a letter from Aurora, confirming that a power connection can be made available. I recommend an appropriate condition that this connection be made prior to 224c certification. The applicant has provided a letter from LightSpeed, stating that a wireless telecommunications connection can be made available, but no evidence has been provided that a strong enough signal is available at the building platform location. RM161179 approved an 8 lot subdivision with associated reticulated telecommunications connections, and in my opinion the ability to provide an additional reticulated connection is likely to be available, should appropriate wireless telecommunications be unavailable. I recommend an appropriate condition regarding the provision of an appropriate telecommunications connection prior to 224c certification.	**X**

ENGINEERING		COMMENTS	Condition
NATURAL HAZARDS	**Hazards on or near the site**	Council's GIS shows that the site is overlain by several alluvial fan hazard layers, and that there is a landslide hazard to the northeast of the proposed building platform location. The Otago Regional Council's (ORC) GIS shows that the site is within liquefaction Domain A, meaning the likely risk due to liquefaction is "low to none." I make no recommendations with regard to liquefaction.	
	Hazard assessment by	GeoSolve Limited	
	Report reference	'*Geotechnical Report. Lot 33 DP 417527, 106 Eastburn Road, Queenstown.'* GeoSolve ref 200605, dated 20/10/2020.	
	Report on Hazards	GeoSolve concludes that the "*alluvial fan risk is assessed to be low and no special provision are considered necessary,*" as there are several topographic features upslope to intercept alluvial material, reflected by the thick layer of topsoil established on the building platform. I accept this expert advice and I make no recommendations in this regard. As "*site mapping indicates the landslide feature is confined to the steep break in slope, roughly at the level of Eastburn Road, approximately 70- 80 m north of the platform, and is not directly upslope from the building platform*," GeoSolve assesses the risk to be very low on the building platform. I accept this expert advice and I make no recommendations in this regard. Following public notification, the ORC contacted QLDC and the applicant with concerns regarding the potential for interaction between the landslide and alluvial fans above the site. GeoSolve provided a response with the conclusion that this risk is also low at the site. Consequently, the ORC accepted these further comments and stated they have no further concerns with regard to natural hazards at the site.	

ENGINEERING		COMMENTS	Condition
PROJECT	**Developers Engineering Representative**	Required.	**X**
	Notice of commencement	Not required.	
	Traffic Management Plan	Required for works affecting the road reserve.	**X**
	Design Certificates	Required.	**X**
	Completion Certificates	Required.	**X**
	As builts	Required.	**X**

ENGINEERING		COMMENTS	Condition
TITLES	**Previous Subdivision Approvals**	As the boundary adjustment proposed is reliant on boundaries to be created by previously-approved subdivisions (which have not been given effect to), I recommend a condition that 224c certification be granted and titles issued for the subdivision approved by RM180960 prior to 224c certification for the subject boundary adjustment.	**X**

	Consent Notices	There are currently no consent notices registered on any of the affected titles. I recommend new covenant conditions regarding on-site wastewater treatment and disposal, monitoring of the water supply and the requirement for an on-site static firefighting water reserve. These are discussed further in the relevant sections herein.	**X**
	Easements	A condition is recommended to ensure all necessary easements are granted or reserved.	**X**
	Road Names on title plan	Not required.	
	Building platforms	Digital location on survey plan required.	**X**
	Amalgamation Condition	There are currently no amalgamations affecting the subject titles. I am satisfied that no amalgamations are required.	

RECOMMENDED CONDITIONS – BOUNDARY ADJUSTMENT SUBDIVISION

It is recommended that the following conditions are included in the consent decision:

General

1. All engineering works shall be carried out in accordance with the Queenstown Lakes District Council's policies and standards, being QLDC's Land Development and Subdivision Code of Practice adopted on 3rd May 2018 and subsequent amendments to that document up to the date of issue of any resource consent. Current version 1.1.

   Note: The current standards are available on Council's website via the following link: https://www.qldc.govt.nz

To be completed prior to the commencement of any works on-site

2. The owner of the land being developed shall provide a letter to the Manager of Resource Management Engineering at Council advising who their representative is for the design and execution of the engineering works and construction works required in association with this development and shall confirm that these representatives will be responsible for all aspects of the works covered under Sections 1.7 & 1.8 of QLDC's Land Development and Subdivision Code of Practice, in relation to this development.

3. Prior to commencing works on the site, the consent holder shall obtain 'Engineering Review and Acceptance' from the Queenstown Lakes District Council for development works to be undertaken and information requirements specified below. The application shall include all development items listed below unless a 'partial' review approach has been approved in writing by the Manager of Resource Management Engineering at Council. The 'Engineering Review and Acceptance' application(s) shall be submitted to the Manager of Resource Management Engineering at Council for review, prior to acceptance being issued. At Council's discretion, specific designs may be subject to a Peer Review, organised by the Council at the applicant's cost. The 'Engineering Review and Acceptance' application(s) shall include copies of all specifications, calculations, design plans and Schedule 1A design certificates as is considered by Council to be both necessary and adequate, in accordance with Condition (1), to detail the following requirements:

   a) Provision of a minimum supply of 2,100 litres per day of potable water to the building platform on Lot 33 that complies with/can be treated to consistently comply with the requirements of the Drinking Water Standard for New Zealand 2005 (Revised 2018). For all surface water or ground water takes this shall include the results of chemical test results no more than 5 years old and bacterial test results no more than 3 months old at the time of submitting the test results. The testing must be carried out by a Ministry of Health recognised laboratory (refer to http://www.drinkingwater.esr.cri.nz/mohlabs/labmain.asp) and be accompanied by a laboratory report with non-compliances highlighted and outlining any necessary remedial means of remedial treatment.

b) The provision of a sealed vehicle crossing to Lot 20 from Eastburn Road to be in terms of Diagram 2, Appendix 7 of the District Plan. This shall be trafficable in all weathers and be capable of withstanding an axle load of 8.2 tonnes or have a load bearing capacity of no less than the public roadway serving the property, whichever is the lower. Provision shall be made to continue any roadside drainage.

c) The provision of an access way to the building platform on Lot 33 that complies with the guidelines provided for in QLDC's Land Development and Subdivision Code of Practice. The access shall have a minimum formation standard of 150mm compacted AP40 with a 3.5m minimum carriageway width. Provision shall be made for stormwater disposal from the carriageway.

d) The provision of Design Certificates for all engineering works associated with this subdivision submitted by a suitably qualified design professional (for clarification this shall include all Roads and Water reticulation). The certificates shall be in the format of the QLDC's Land Development and Subdivision Code of Practice Schedule 1A Certificate.

4. The consent holder shall obtain and implement a traffic management plan approved by Council prior to undertaking any works within or adjacent to Council's road reserve that affects the normal operating conditions of the road reserve through disruption, inconvenience or delay. The Traffic Management Plan shall be prepared by a Site Traffic Management Supervisor (STMS). All contractors obligated to implement temporary traffic management plans shall employ a qualified STMS to manage the site in accordance with the requirements of the NZTA's "*Traffic Control Devices Manual Part 8: Code of practice for temporary traffic management*". The STMS shall implement the Traffic Management Plan. A copy of the approved plan shall be submitted to the Manager of Resource Management Engineering at Council prior to works commencing.

5. Prior to commencing any work on the site the consent holder shall install measures to control and/or mitigate any dust, silt run-off and sedimentation that may occur, in accordance with QLDC's Land Development and Subdivision Code of Practice to ensure that neighbouring sites remain unaffected from earthworks. These measures shall be implemented **prior to** the commencement of any earthworks on site and shall remain in place for the duration of the project, until all exposed areas of earth are permanently stabilised.

To be monitored throughout earthworks

6. The earthworks and batter slopes shall be undertaken in accordance with the recommendations of the report by GeoSolve ('*Geotechnical Report. Lot 33 DP 417527, 106 Eastburn Road, Queenstown.'* GeoSolve ref 200605, dated 20/10/2020).

7. The consent holder shall implement suitable measures to prevent deposition of any debris on surrounding roads by vehicles moving to and from the site. In the event that any material is deposited on any roads, the consent holder shall take immediate action, at his/her expense, to clean the roads. The loading and stockpiling of earth and other materials shall be confined to the subject site.

8. No earthworks, temporary or permanent, are to breach the boundaries of the site, except for the works required to construct an approved vehicle crossing and provide a power connection to the site.

To be completed before Council approval of the Survey Plan

9. Prior to the Council signing the Survey Plan pursuant to Section 223 of the Resource Management Act 1991, the consent holder shall complete the following:

a) All necessary easements shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved.

To be completed before issue of the s224(c) certificate

10. Prior to 224c certification, evidence shall be provided to Council that Survey Plan LT 532665 has been deposited and the associated Records of Titles have been issued. That is, a s224(c)

certificate shall have been issued stating that all of the conditions of the consents have been complied with.

Advice Note: the above condition seeks to ensure that the subdivisions approved under RM160880 as varied by RM171236, RM161179 as varied by RM190413 and RM180960 have been completed prior to this application proceeding. This application is reliant on those subdivisions being completed first.

11. Prior to certification pursuant to section 224(c) of the Resource Management Act 1991, the consent holder shall complete the following:

    a) The consent holder shall provide 'as-built' plans and information required to detail all engineering works completed in relation to or in association with this subdivision to the Manager of Resource Management Engineering at Council. This information shall be formatted in accordance with Council's 'as-built' standards and shall include all Water reticulation (including private laterals and toby positions).

    b) A digital plan showing the location of all building platforms as shown on the Land Transfer Plan shall be submitted to the Manager of Resource Management Engineering at Council. This plan shall be in terms of New Zealand Transverse Mercator 2000 coordinate system (NZTM2000), NZGDM 2000 datum.

    c) The completion and implementation of all works detailed in Condition (3) above.

    d) Written confirmation shall be provided from the electricity network supplier responsible for the area, that provision of an underground electricity supply has been made available (minimum supply of single phase 15kVA capacity) to the development and that all the network supplier's requirements for making such means of supply available have been met.

    e) Written confirmation shall be provided from the telecommunications network supplier responsible for the area that provision of telephone services has been made available to the development and that all the network supplier's requirements for making such means of supply available have been met.

    f) The submission of Completion Certificates from both the Contractor and Approved Engineer for all engineering works completed in relation to or in association with this subdivision (for clarification this shall include all Roads and Water reticulation). The certificates shall be in the format of a Producer Statement, or the QLDC's Land Development and Subdivision Code of Practice Schedule 1B and 1C Certificate.

Ongoing Conditions/Consent Notices

12. In the event that the Engineering Acceptance issued under Condition (3) contains ongoing conditions or requirements associated with the installation, ownership, monitoring and/or maintenance of any infrastructure subject to Engineering Acceptance, then at Council's discretion, a consent notice (or other alternative legal instrument acceptable to Council) shall be registered on the relevant Records of Title detailing these requirements for the lot owner(s). The final form and wording of the document shall be checked and approved by Council's solicitors at the consent holder's expense prior to registration to ensure that all of the Council's interests and liabilities are adequately protected. The applicant shall liaise with the Subdivision Planner and/or Manager of Resource Management Engineering at Council in respect of the above. All costs, including costs that relate to the checking of the legal instrument by Council's solicitors and registration of the document, shall be borne by the applicant.

    [Note: This condition is intended to provide for the imposition of a legal instrument for the performance of any ongoing requirements associated with the ownership, monitoring and maintenance of any infrastructure within this development that have arisen through the detailed engineering design and acceptance process, to avoid the need for a consent variation pursuant to s.127 of the Resource Management Act].

13. The following conditions of the consent shall be complied with in perpetuity and shall be registered on the relevant Titles by way of Consent Notice pursuant to s.221 of the Act:

a) All future buildings shall be contained within the Building Platform as shown as Covenant Area X as shown on Land Transfer Plan XXXXX

b) At the time a residential unit is erected on the lot, the owner for the time being shall engage a suitably experienced person as defined in sections 3.3 & 3.4 of AS/NZS 1547:2012 to design an onsite effluent disposal system in compliance with AS/NZS 1547:2012. The design shall take into account the site and soils investigation report and recommendations by Civilised Limited, dated 17 February 2020, including the recommendation to provide secondary treatment to effluent prior to discharge to ground. The proposed wastewater system shall be subject to Council review prior to implementation and shall be installed prior to occupation of the residential unit.

   The wastewater disposal field shall be blocked off to vehicular traffic and stock. This shall be achieved through use of a physical barrier, such as fencing or other suitable measures that will prevent vehicles and stock from passing over the disposal area.

c) The drinking water supply is to be monitored in compliance with the Drinking Water Standards for New Zealand 2005 (revised 2018), by the consent holder, and the results forwarded to the Environmental Health Team Leader at Council. The Ministry of Health shall approve the laboratory carrying out the analysis. Should the water not meet the requirements of the standard then the consent holder shall be responsible for the provision of water treatment to ensure that the Drinking Water Standards for New Zealand 2005 are met or exceeded.

d) Prior to the occupation of any residential unit on the lot, domestic water and firefighting storage is to be provided. A minimum of 45,000 litres shall be maintained at all times as a static firefighting reserve within a 55,000 litre combination of tanks tank (or alternative). Alternatively, a 7,000 litre firefighting reserve is to be provided for each residential unit in association with a domestic sprinkler system installed to an approved standard. A firefighting connection in accordance with Appendix B - SNZ PAS 4509:2008 is to be located no further than 90 metres, but no closer than 6 metres, from any proposed building on the site. Where pressure at the connection point/coupling is less than 100kPa (a suction source - see Appendix B, SNZ PAS 4509:2008 section B2), a 100mm Suction Coupling (Female) complying with NZS 4505, is to be provided. Where pressure at the connection point/coupling is greater than 100kPa (a flooded source - see Appendix B, SNZ PAS 4509:2008 section B3), a 70mm Instantaneous Coupling (Female) complying with NZS 4505, is to be provided. Flooded and suction sources must be capable of providing a flow rate of 25 litres/sec at the connection point/coupling. The reserve capacities and flow rates stipulated above are relevant only for single family residential units. In the event that the proposed residential units provide for more than single family occupation then the consent holder should consult with Fire and Emergency New Zealand (FENZ) as larger capacities and flow rates may be required.

   The FENZ connection point/coupling must be located so that it is not compromised in the event of a fire.

   The connection point/coupling shall have a hardstand area adjacent to it that is suitable for parking a fire service appliance. The hardstand area shall be located in the centre of a clear working space with a minimum width of 4.5 metres. Pavements or roadways providing access to the hardstand area must have a minimum formed width as required by QLDC's standards for rural roads (as per QLDC's Land Development and Subdivision Code of Practice adopted on 3rd May 2018 and subsequent amendments to that document up to the date of issue of any subdivision consent). The roadway shall be trafficable in all weathers and be capable of withstanding an axle load of 8.2 tonnes or have a load bearing capacity of no less than the public roadway serving the property, whichever is the lower. Access shall be maintained at all times to the hardstand area.

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

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

Firefighting water supply may be provided by means other than the above if the written approval of the Fire and Emergency New Zealand Fire Risk Management Officer is obtained for the proposed method.

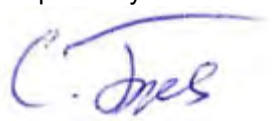
The firefighting water supply tank and/or the sprinkler system shall be installed prior to the occupation of the building.

Note: *Fire and Emergency New Zealand considers that often the best method to achieve compliance with SNZ PAS 4509:2008 is through the installation of a home sprinkler system in accordance with Fire Systems for Houses SNZ 4517:2010, in each new residential unit. Given that the proposed residential unit is are approximately 13km from the nearest FENZ Fire Station the response times of the New Zealand* ***Volunteer*** *Fire brigade in an emergency situation may be constrained. It is strongly encouraged that a home sprinkler system be installed in the new residential unit / building.*

Advice Note:

1. This consent triggers a requirement for Development Contributions, please see the attached information sheet for more details on when a development contribution is triggered and when it is payable. For further information, please contact the DCN Officer at Council.

Prepared by:



Cameron Jones
LAND DEVELOPMENT ENGINEER

Reviewed by:

Michael Wardill
TEAM LEADER
RESOURCE MANAGEMENT ENGINEERING

APPENDIX 3 LANDSCAPE REPORT – MICHELLE SNODGRASS

RM 200240 LOT 33 EASTBURN ROAD, CROWN TERRACE

LAND USE CONSENT FOR A BOUNDARY ADJUSTMENT, AND TO ESTABLISH A RESIDENTIAL BUILDING PLATFORM

LANDSCAPE ASSESSMENT REPORT AND PEER REVIEW

Michelle Snodgrass
LANDSCAPE ARCHITECT
0275 777 909 | michelle@msla.co.nz
7 Ferry Lane, Central Otago 9383

Landscape Assessment Report

1.0 Introduction

I have been asked by QLDC to undertake a full landscape assessment report and peer review, to assess a proposal boundary adjustment, establish a residential building platform, access and proposed landscaping. The site is located at the northern end of Eastburn Road on the Crown Terrace and includes farming land and a gentle slope. The proposal includes Lot 33 and Lot 20 and is 45.62ha in total in area, although the location of the proposed RBP and driveway is Lot 33.

A detailed landscape assessment and accompanying plans and images have been prepared by Patch Limited as part of the application prepared by Southern Planning Ltd.

In my opinion the landscape assessment report provided in the application is thorough, therefore for brevity I will not repeat the report apart from where, in my opinion, aspects require discussion. This report will therefore include the following:

- A summary description of the proposal
- A summary of the existing landscape and context
- Landscape effects
- Visual and amenity effects
- Operative QLDC District Plan Chapter 5.4.2.2 (3) and Chapter 15.2.3.6 assessment matters
- Proposed QLDC District Plan Chapter 24.7.5 and Chapter 27.9.3.3 assessment matters
- Conclusion

Attached to this report, in the appendix, are:

- Attachment A: suggested conditions of consent if the application is approved

- Attachment B: a definition of the degrees of magnitude/visual amenity used in the assessment section;
- Attachment C: a definition of the Determination of magnitude of landscape effects used in the assessment section.

The site as part of the wider farm property owned by the applicant has been subject to a number of resource consents as described in the application. None of the consent conditions in those resource consents apply to either Lot 20 or Lot 33.

I undertook a site visit on the 14th of May 2020, and assessed the proposal from within the site, Eastburn Road and Crown Terrace Road.

For the sake of clarity I will refer to the current Lot 33 as the site.

2.0 The Proposal

The proposal is described in detail in the application and Patch Ltd report. To summarise the proposal is to create a 1000m2 RBP and adjust the boundary between Lot 33 and Lot 20 in favor of Lot 20 as follows:

- Lot 20 will increase in size from 34.72ha to 43.29ha
- Lot 33 will decrease in size from 10.9ha to 1.81 ha

The new boundary between the two lots will follow an existing fence line at the toe of the gentle slope below to Eastburn Road. All other boundaries will remain unchanged. Lot 33 is proposed to contain a 1000m2 residential building platform which is subject to design controls relating to a maximum building height as measured off a relative level, cladding and roofing colours, a curtilage area, proposed planting, and a driveway.

Lot 20 will continue to be farmed as part of the larger land holding owned by the applicant which also includes the existing homestead and associated outbuildings.

3.0 Site and context description

The site has been described in detail in the Patch Ltd Landscape Assessment Report, and as described it is located on Eastburn Road on the Crown Terrace approximately 820m south of the

intersection with Crown Range Road. The boundary between Lot 20 and Lot 33 currently runs parallel and 13.5m west of an existing fence line.

As described in the Patch Ltd report Eastburn Road forms the sites eastern boundary, a shallow gully with either Crack or Grey Willow trees marks the site's northern and north-western boundary, and an existing shelterbelt of evergreen trees marks the southern boundary. The eastern end or top of two fingers of Matagouri extend into the western end of the site. Lot 33 includes a single semi-circular corrugated iron hay shed in the western third of the site and an internal fence line, the proposed new boundary, at the toe of a gentle slope that rises up to Eastburn Road. As described in the Patch Ltd report Lot 33 gently slopes from the internal fence line to the west.

Also as described in the Patch Ltd report the site is part of the wider Crown Terrace landscape
The site is topographically part of the broader, roughly oval shaped Crown Terrace which is elevated between the floor of the Wakatipu Basin and the steep slopes of the Crown Range. The Crown Terrace is formed of moraine remnants and associated outwash gravels that slope from the toe of the Crown Range mountains to the terrace edge. The terrace has been further eroded and shaped into a series of rolling gullies by minor and major water courses such as Royal Burn and Swift Burn which flow off the slopes of the Crown Range, across the terrace and over the edge of the escarpment to the Wakatipu basin floor and the Kawarau Gorge.

The cultural overlay of the landscape context described above is, as described in the Patch Ltd report, is mostly a pastoral landscape character with fences, paddocks, shelterbelts, road and farm tracks. Residential development has occurred throughout this landscape on often smaller sized lots well-spaced apart and discrete allowing larger parcels of land in between to be farmed.

The immediate context of the site, outside of Lot 33 is the following:

- Lot 20, a 34.72ha lot on the western side of the subject site which was the subject of RM 161179.
- 108 Eastburn Road, a 16.44ha site on the southern side of the subject site, which is owned by the applicant and contains a dwelling and a number of outbuildings.
- On the eastern side across Eastburn Road is 117 Eastburn Road - a 199.8ha farm.
- On the northern boundary is 412-464 Crown Range Road - a 90.586ha farm.
- At almost equidistant spacing's to the north and below Eastburn Road are two small lots of a similar size to the proposed Lot 33, each with a residential building platform.

On the whole, the surrounding properties have a strongly authentic agricultural character with older farm buildings more visible, and newer residential developments in discrete locations. Planting is often homogenous, linear and functional.

4.0 Zoning

The site is zoned Rural General for the entire site under the ODP, and Wakatipu Basin Amenity Zone in the PDP.

5.0 Landscape classification and character

Under the ODP Appendix *8A Map 2: Landscape categorization in the Wakatipu Basin* shows the landscape classification of the site as VAL. As described in the Patch Ltd report and on the accompanying plans, on the PDP Stage 1 and 2 Decisions Map the site is shown as being within the Wakatipu Basin Amenity Zone. The Patch Ltd report also shows the northern half of Eastburn Road as being an ONL. I agree with the Patch Ltd report as to the site's classification.

Under the PDP Wakatipu Basin Amenity Zone the site is within Landscape Character Unit 20: Crown Terrace. The unit is described as having a reasonably open character and flat to gently rolling landform pattern that makes much of it highly visible from the Crown Range Road. It displays a working rural landscape character with a reasonably spacious patterning of rural residential development in places, and a reasonably high degree of naturalness as a consequence of its predominantly open and pastoral character and proximity to the Crown Range landscape. The visual amenity values to be maintained and enhanced are the sense of openness and spaciousness associated with the pastoral landscape, and dramatic views from the Crown Range Road to the Wakatipu basin and surrounding mountains. The description also says that larger scale lots suggest potential for subdivision and that the capability to absorb additional development is very low.

I agree with the description of the Crown Terrace unit.

6.0 The visual effects of the proposal

An assessment of visual effects deals with the effects of change and development on the views available to people, and their visual amenity. The visual amenity effect is the difference between the landscape character of the current site, and the changes to the character from the proposed development. This visibility assessment is an estimate of effects.

For each viewpoint, the current visibility of the site, the visibility of the proposed building platform and associated works, and the effect on visual amenity will be described with reference to the Patch Ltd report and attachments.

The degree of visibility is described as:

- Nil
- Low
- Moderate
- High

The effect on visual amenity is assessed as per the *'Definition of Magnitude'* in Attachment A of the report and is described as:

- None
- Negligible
- Slight
- Moderate
- Substantial
- Severe

From my site visit on the 14th May 2020 I have assessed and concur with the Patch Ltd report that the site and proposed RBP is only visible from parts of the Crown Range Road, and parts of Eastburn Road. The winding nature of Crown Terrace Road, and topography on the southern side of the road largely screens views of the site from Crown Terrace Road. I agree with the Patch Ltd report that the proposed RBP will not be visible when travelling uphill as the guardrail and edge of the road screens the site, and will only be visible when travelling downhill as intermittent views from three locations (Attachment C and Images 1-3 of the Patch Ltd report).

The existing visual amenity experienced from the Crown Terrace is the complexity of the topography both at the vast scale of mountains, terraces, roche moutonees and valleys and the smaller scale of gullies, rocky outcrops, knolls and rolling landform. The glacial processes and generally minimal vegetation cover makes the topography in all its detail very easy to see. This is then overlaid with farming and natural patterns of vegetation, roads and buildings. The landscape is coherent with a predominantly open pastoral character and largely uncluttered landform patterns. Views are open and dramatic. The existing visual amenity is high in that the Crown Terrace exhibits a very strong positive character with valued features that combines to give an experience of unity, richness and harmony.

PUBLIC LOCATIONS

Crown Terrace Road

Existing visibility of site

Views are intermittent from a total length of road of approximately 1.5km when travelling downhill which equates to the Points 1 to 3 on Attachment C of the Patch Ltd report. Views are glimpses from Points 2 and 3. From Viewpoint 1, on the road, the site is screened by topography on the southern side of the road. Viewpoint 1 is a pull over bay with interpretation by the Wakatipu Wilding Conifer Group. An observer needs to climb up the small knoll to obtain a view of the Crown Terrace, part of the Kawarau Gorge and the surrounding mountains. From this viewing spot the site is largely visible in the midground as part of the Crown Terrace. The very north eastern corner of the site is screened by the slopes below Crown Range Road. Parts of the Wakatipu Basin, Lake Wakatipu, Frankton, and the enclosing mountains ranges are also visible in this view. The degree of visibility of the site is moderate to low from this viewpoint for a viewer who climbs up onto the knoll and nil for a viewer in a vehicle.

From Viewpoint 2, as described in the Patch Ltd report the view is a narrow, fleeting one through a break in the roadside vegetation. As with Viewpoint 1, the viewer takes in the wider landscape of the Wakatipu Basin, the Frankton Arm, Frankton, and the enclosing mountains which from this viewpoint is highly visible. The majority of the existing Lot 33 is visible through the small break in the roadside vegetation. The degree of visibility of the site is low for a viewer who walks to the gap in the roadside vegetation and low to nil for a viewer in a vehicle.

I agree with the Patch Ltd report that at Viewpoint 3 that a viewer can see the site if standing near the road side barrier at the pull off bay. I also agree that from the road a viewer in a vehicle will obtain a brief, glimpse view of the site. As with Viewpoints 1 and 2 the wider views of the landscape

including other parts of the Crown Terrace, parts of the Wakatipu basin, the mountain ranges and Frankton are clearly visible and dominate the view.

The degree of visibility from Viewpoint 3 is low to nil.

Visibility of the proposal

I agree with the Patch Ltd report that the proposed RBP would not be visible from a viewer heading uphill, and that a viewer will only obtain glimpse views from the three viewpoints detailed in the Patch Ltd report. The proposed planting is likely to render a future house on the proposed RBP very difficult to see once mature.

The degree of visibility of the RBP and a future house will be nil to low.

Effect on visual amenity

The proposal will have the effect of an additional building and a small amount of planting into a visual amenity that is predominantly open, spacious and agricultural. The proposed RBP will reduce the amenity of openness of the site, however the effect will be very limited as experienced from Crown Range Road as the location of the RBP is close to the edge of the paddock and the site is a small part of a far larger and more complex visual amenity. The elements of agricultural land, shelterbelt and farm building of the Crown Terrace will remain the dominant visual amenity. The visual amenity of the mountain slopes, Wakatipu Basin and Frankton will remained unchanged.

The magnitude of effect on visual amenity of the proposed RBP as experienced from Crown Range Road will be negligible.

Eastburn Road

Existing visibility of site

The current Lot 33 is visible from on Eastburn Road when travelling south from a point approximately 350m north of the northern boundary of the site until a viewer is past the site. From this viewpoint the slope below the road, the paddock, semi-circular shed and willows within the shallow gully are clearly visible in the foreground. The midground view is of the shelterbelts within the applicant's property which run across the view, some small sheds and part of the farm house. The mountain slopes of Ben Cruachan and Mt Edward form the background.

When travelling north the site is visible as glimpse views across the applicants property at 108 Eastburn Road from approximately a driveway into the sheds until approximately opposite the farmhouse where the site becomes more visible until a viewer has passed the site. The foreground

and midground view is of the undulating land of the Crown Terrace with open paddocks, and shelterbelts and a background view of the mountains that ring the Wakatipu Basin.

The degree of visibility is high between the southern boundary of the site and approximately the northern boundary of Lot 3 DP 336049.

Visibility of the proposal

The RBP and a future house will be visible as per the existing site until the proposed native planting has reached maturity and until the proposed Lawson's cypress has reached the height of a future house. I agree with the Patch Ltd report that, provided the planting is irrigated and protected from damage the RBP and a future house is likely to be completely screened in 10 years. The proposed driveway where it crosses the toe of the slope will remain visible from south of the site.

The degree of visibility will be high initially reducing to low-nil at 10 years from implementing the proposed planting.

Effect on visual amenity

There will be a change to the visual amenity due to the addition of a future house and a reduction in the view across the site from a short section of Eastburn Road which is currently the foreground view of an open paddock. I estimate that the proposed planting will not screen more than the current Lot 33 paddock and will retain views over the undulating landform of the Crown Terrace, the paddocks and shelterbelts when viewed from the south and adjacent to the site. When viewed from the north the planting is likely to screen a small part of the toe of the slope uphill of Eastburn Road and the buildings at 111 Eastburn Road. Wider views beyond the Crown Terrace are likely to remain unaffected.

The magnitude of effect on visual amenity of the proposed RBP, a future house and mitigation planting will be moderate from Eastburn Road due to the location of the RBP being close to the road, however I do not believe the proposal will change the character of the wider landscape.

Private views

I agree with the Patch Ltd report that the proposed RBP may be visible from some of the adjacent pastoral lands. There are two consented building platforms that are currently undeveloped from where an observer may potentially see the proposed RBP. The building platforms are Lot 6 of RM 161179 and Lot 3 DP 336049. I have not been on either site and have estimated the potential visual effects from these two properties.

Lot 6 RM161179

Existing visibility of site

Lot 33, and the location of the proposed building platform is possibly visible through a very narrow viewshaft between an existing evergreen shelterbelt on the eastern side of Lot 6 and a block of existing native vegetation that is conditioned to be enhanced under RM161179.

The degree of visibility is low.

Visibility of the proposed building platform

The visibility of the proposed building platform from a future house on Lot 6 will be the same as that of the existing site. The viewshaft is across rolling land and depending on where a future house is located within the consented building platform, the proposed RBP may not be visible.

The degree of visibility will be low.

Effect on visual amenity

There will be a change to the visual amenity from a future house on Lot 6 due an additional building platform and future house and associated domestic elements that may be visible through the narrow viewshaft across the open paddock between the viewer and the proposed RBP. The wider visual amenity will remain as it is as the proposed RBP and future house will occupy a small part of the view shaft and will not obscure views of the wider landscape.

The magnitude of effect on visual amenity of the RBP will be slight.

Lot 3 DP336049

Existing visibility of site

The consented building platform on Lot 3 DP336049 is located on the same gentle slope as the proposed RBP. I estimate that the site, apart from the eastern edge is visible from Lot 3 DP336049. The location of the proposed RBP is partially to fully screened by a small convex undulation in the slope between the two sites.

The degree of visibility of Lot 33 is high to nil.

Visibility of the proposed building platform

The visibility of the proposed RBP from a future house on Lot 3 DP336049 is likely to be fully screened by the topography between the two sites and the proposed Leyland cypress planting on the north eastern end of the property boundary.

The degree of visibility will eventually be nil once the Leyland cypress have reached the maximum height of a future house.

Effect on visual amenity

There will be a change to the visual amenity from a future house on the RBP, however the greater effect to the visual amenity will be the extension of the existing tree line into the northeastern corner of the site. As the existing undulation in the gentle slope between the two sites already potentially screens the RBP, the effect on visual amenity is likely to be small as there will be only a small change to rural views over the Lot 33 paddock from a future house on Lot 3 DP336049.

I estimate that the magnitude of effect on visual amenity of the RBP and mitigation planting will be negligible to slight.

7.0 The landscape effects of the proposed consent

The level of magnitude of landscape effect will be described as:

- Negligible
- Low
- Medium
- High

The definition of the above level of magnitude is described under Attachment B.

Landscape effects are those effects on the landscape as a resource, namely its landscape character and the components that make up that character, rather than visual issues. I have considered these effects with reference to the sites current use and character.

The elements of the site and wider landscape that are potentially affected by the proposed development are the openness and spaciousness of the site and it's predominantly authentic agricultural character.

The proposed building platform is somewhat characteristic of the surrounding landscape as illustrated by Attachment B of the Patch Ltd report. Attachment B shows 13 building platforms generally in loose clusters with larger blocks of farmed land in between. On the same slope below Eastburn Road there are two building platforms to the north within small lots separated by undulations in the topography and adjacent to far larger, open paddocks. The pattern of development in the wider landscape tends to be discrete building platforms in small lots balanced by large farmed lots. The pattern has maintained the openness and spaciousness and the agricultural character of this part of the Crown Terrace landscape. The location of the proposed building

platform and the size of proposed Lot 33 and the increased size of proposed Lot 20 mimics this pattern.

Design controls have been proposed to contain domestic elements to the curtilage area which will aid in preventing the spread of those elements over the entire proposed Lot 33. In my opinion any structures such as pergolas, garden sheds, small farm buildings, play houses etc. should be kept within the curtilage area and specifically restricted from the remainder of the site to maintain the rural and agricultural character. If not restricted there is the potential for a lifestyle character to evolve on proposed Lot 33 as the site is not a working farm and the proposal is not a new homestead node associated with that farm.

A potential adverse effect on the landscape character is from the use of mitigation planting to screen the building platform and a future house when topography and existing shelterbelts and trees do not provide screening. Additional planting can enclose the paddocks further reducing the elements of openness and spaciousness and cumulatively can result in a landscape character like other parts of the Wakatipu basin which have an Arcadian character of enclosed spaces, mounding and amenity tree planting. Planting around houses for shelter and amenity is not uncharacteristic of the vicinity as can be seen in the tree planting around the homestead at 108 Eastburn Road. The mitigation tree planting is confined to around the curtilage area and still allows views over the paddock and majority of what is currently Lot 33 to farmed land. In my opinion further planting of the road frontage, the lot boundary, fence lines or within proposed Lot 33 beyond what is proposed would be detrimental to the character and restrict views across open paddocks.

The proposal, with additional design controls, will in my opinion result in a magnitude of effect on the landscape character of low.

8.0 Assessment matters under the Operative D.P and Proposed D.P

In both the ODP and PDP the effect of existing vegetation planted before 28th September 2002 is assessed as to its benefits to the proposal. As described in the Patch Ltd report , the site includes an existing line of Crack or Grey Willow trees on the northern boundary which partially screen the current Lot 33 paddock and provide an existing vegetation element which has been built upon in the proposed landscape plan to provide screening of the proposed building platform. In a search of aerial photos on Google Earth from 2004 it appears that the Willow trees are large enough to have been planted or to have established from a wild source before 2002. The Willows are beneficial to

the development in that they partially screen proposed Lot 33 and a future house however they are an identified weed species.

ODP CHAPTER 5.4.2.2 (3) ASSESSMENT MATTERS – VAL

(a) Effects on natural and pastoral character

I agree with the Patch Ltd report that the proposed development will have very low adverse effects on the adjacent ONL of the slopes of the Crown Terrace due to the buffer of mitigation planting and the context below Eastburn Road of built elements of the nearby homestead node at 108 Eastburn Road.

I agree with the Patch Ltd report that the proposed RBP is set back from the more open paddocks on the terrace, and is set within a pattern of existing rural living development along the western side of Eastburn Road. I agree that the open character of the landscape will be adversely affected to a low degree.

I agree the proposed row of Lawson's Cypress will provide screening of the proposed RBP from northerly views including those from Eastburn Road. The Lawson's Cypress being an evergreen conifer will have a strong visual and character link to existing evergreen shelterbelts in the wider landscape. I also agree that the mitigation planting of natives will not fully screen a future house on proposed Lot 33 but will provide a degree of screening without obstructing views to the landscape of this part of the Crown Terrace and wider mountain ranges. The link with the natural character of the Swiftburn Gully and approved rural living type development on neighbouring sites is perhaps less tenuous as the majority of the planting on land under RM16179, which is in close proximity, builds on the natural features of Swiftburn Gully and existing areas of grey shrubland which follow a natural pattern. The location of proposed Lot 33 does not contain any pockets of grey shrubland although there are groups of Coprosma or Matagouri trees within the current Lot 33. The proposed species are nonetheless appropriate in the broader landscape.

(b) Visibility of development

I agree with the Patch Ltd report's assessment of the visibility of the proposed RBP, and that the Lawson's Cypress trees are likely to mitigate northerly views from Eastburn Road. The mitigation planting of natives will obstruct foreground views of open paddocks when adjacent to the site as viewed from Eastburn Road. This will be for a short distance and still maintain views over the planting to paddocks and rolling terrace landforms beyond the site.

I agree that the site is defined by topography generally outside of the site – the shallow gully on the northern boundary, the mountain slopes above Eastburn Road and the general enclosure of the Crown Range at the southern end of the Crown terrace landform. I also agree that the RBP and a future house will not break the line and form of any skyline, ridge, hill or prominent slope.

I agree that the proposal including the driveway will affect the existing natural topography to a low degree. Leaving the proposed RBP to be excavated at the time a house is proposed is likely to result in far less and more appropriate earthworks than levelling of the building platform at this stage. I also agree that the proposed new boundary being located on an existing fence line at approximately a natural change in slope will not result in any arbitrary new lines in the landscape.

As discussed previously, I agree the proposal will fit into an existing development pattern and will not lead to over-domestication of the landscape. I also agree that the development will not lead to sprawl along the districts roads as existing houses and consented, undeveloped building platforms exist further along Eastburn Road than the proposal.

(c) Form and density of development

I agree with the Patch Ltd report that the RBP is located where access is aggregated with the existing homestead node at 108 Eastburn Road. I also agree that the location of the RBP retains the open and flatter paddocks west of proposed Lot 33 in their current pastoral state. The design control relating to the maximum building height below Eastburn Road and the proposed native planting between the RBP and the road will eventually result in a house and associated domestic elements that are not highly visible.

I agree the proposal will not introduce any densities indicative of urban areas.

Within a 500m radius of the site, the land is owned by the applicant, RM161179, and 117 Eastburn Road. As far as I am aware no alternative locations have been proposed by the occupiers or owners of land within a 1,100m radius of the site.

The proposal is a single lot and RBP and is not high density and is unlikely to preclude residential development or subdivision on neighbouring land.

(d) Cumulative effects of development on the landscape

I agree with the Patch Ltd report that the proposal will not lead to further degradation of the landscape and push it to a point where this part of the Crown Terrace cannot absorb further

development. The proposal still allows the agricultural working farm character to dominate and it follows an established pattern.

I partially agree that the proposal will be contained within a discrete landscape unit and by existing topography but this is more because of the proposed building height set off a relative level which will sit a future house down into the slope. The enclosing topography is wider and outside of the site and reduces views from the broader landscape rather than from the local landscape.

I agree that no infrastructure is proposed that is consistent with urban landscapes.

(e) Rural amenities

I agree with the Patch Ltd report that the proposed mitigation planting will not prevent views to open paddocks and across those paddocks towards the open and natural landscapes to the west. I also agree with the low degree of effect from the Crown Range Road in that wider landscape will continue to dominate the view and the retention of Lot 20 in the foreground of views will remain open.

I agree that the change of boundary in favour of proposed Lot 20 will potentially improve management of the farm and the ability to undertake agricultural activities.

The proposal does not require street lighting, curb and channelling or any other urban infrastructure and these elements have been controlled to be excluded from use on the site.

Design controls have listed fencing and entranceways to be consistent with rural elements.

The RBP is located well away from the southern property boundary and is within the setback rules for the northern and eastern boundary.

ODP CHAPTER 15.2.3.6 SUBDIVISION ASSESSMENT MATTERS

The following is an assessment under Section 15.2.3.6 Assessment matters for Resource consents of the O.D.P. I have assessed only those matters that relate directly to landscape or visual effects.

(b) Subdivisions of Land in the Rural General, Rural Lifestyle, Gibbston Character, Bendemeer Zones the Rural Residential area at the north of Lake Hayes, and the Quail Rise Zone (Activity Area R2)

(i) The extent to which subdivision, the location of Residential Building Platforms and proposed development maintains and enhances:

a) rural character

I agree with the Patch Ltd report that the subdivision and boundary adjustment will maintain the rural production character of the landscape with spacious patterning of rural residential development because of the location of the RBP, and the boundary adjustment to enlarge Lot 20 for farming use.

b) landscape values

I agree with the Patch Ltd report that the landscape values of natural and open pastoral character of the landscape will be adversely affected to a low degree. I agree that the proposed RBP will be set back from the more open lands of the terrace and separated from the more natural landscape of the mountains by Eastburn Road. The enlargement of Lot 20 and location of the RBP close to Eastburn Road will allow the open pastoral character of the site to remain the dominant landscape value.

c) heritage values

The site has no heritage values.

d) visual amenity

I agree with the Patch Ltd report that overall the development will only be visible from select and intermittent parts of the Crown Range Road and from Eastburn Road when adjacent to the site. Views of the open paddock of the site will be reduced for half the width of the road frontage due to the proposed mitigation planting. The proposed species will allow views over the mitigation planting to open paddocks, the undulating landscape and surrounding mountains beyond. I agree with the Patch Ltd report that the proposal will result in low adverse effects on visual amenity and those effects will be experienced from Eastburn Road only.

PDP CHAPTER 24.7.3 ASSESSMENT MATTERS

Landscape character and visual amenity

(A), (b). I agree with the Patch Ltd report that a future house within the RBP will be well controlled and specified in the proposed design controls. The proposed RBP responds adequately to the landscape character in that it is a single building platform and is located below Eastburn Road and generally follows a pattern established by existing development. The darker colors proposed under the design controls are not as characteristic as existing buildings at 108 and 111 Eastburn Road tend to be in lighter colours. The recessiveness of the specified colours of a future house is more to do with reducing its noticeability and the proposed colours will achieve that objective especially from Crown Range Road.

Landform modification appears to be minimal at this stage including no obvious need for retaining, water tanks or gates and fences other than what is required for firefighting. Landform modification will be required for a future house due to the slope of the site. Reducing the extent of that potential future modification to the curtilage area will maintain the integrity of the visible part of the slope of the site.

I agree with the Patch Ltd report that the proposed planting will complement the existing landscape character and in particular the escarpment, gullies and nearby mountain slopes.

(c) There are no existing covenants or consent notices pertaining to the site.

(d) The visual amenity has been described in Section 6.0 of my report and I also agree with the Patch Ltd report that the visual amenity as experienced from the Crown Range Road will be adversely affected to a low degree.

(e) The location of the proposed RBP close to Eastburn Road has maintained a sense of openness and spaciousness of the site by not locating the RBP out in the paddock of the current Lot 33, although the location of the RBP and associated mitigation planting does impede views of the paddock for a short distance along the road.

(f) No residential flat is proposed.

(g) The proposed RBP is set back from the ONL edge which is demarcated by Eastburn Road. The proposed planting mitigates the potential adverse effects of a future house by increasing the area of natural vegetation. The proposal will not prevent views from Crown Range Road to the ONL context. The site is below the road in elevation, and the proposed species grow to a mature height that is unlikely to obstruct wider views.

(h)In my opinion a bond or covenant would ensure the ongoing maintenance and retention of the proposed planting. The planting forms a vital part of the proposal in terms of mitigation of effects.

(i)The Willows in the gully that forms the northern and north western boundary of the site are likely to be either Crack Willows or Grey Willows and are wilding exotic trees as per Rule 34.4.1 or 34.4.2 on the site. Removal of the willows would be beneficial.

(j) No covenants have been proposed to maintain the Lot 20 paddocks as open space.

PDP CHAPTER 27.9.3.3 SUBDIVISION ASSESSMENT MATTERS

The following is an assessment under Section 27.9.3.3 of the P.D.P which is in relation to Rule 27.5.9 (Wakatipu Basin Rural Amenity Zone and Wakatipu Basin Lifestyle Precinct Subdivision Activities), as the subdivision of the site will result in a lot less than 80ha in area. Although, I note that at the time of preparing this report Rule 27.6.1 is subject to appeal. I have assessed only those matters that relate directly to landscape or visual effects.

General

a. The extent to which the proposal is consistent with objectives and policies relevant to the matters of discretion.

The proposal is consistent with objectives and policies relating to landscape as it will maintain the landscape character and visual amenity values of the Landscape character Unit. The visual amenity of views of the paddocks of the site will be maintained apart from a short section of Eastburn Road. Wider views of farmed paddocks, the rolling landscape and mountains will also be maintained.
The colours, scale , height and location of a future house and associated mitigation planting will be controlled by proposed design controls.

b. The extent to which the subdivision provides for low impact design that avoids or mitigates adverse effects on the environment.

The subdivision is a single lot and includes a boundary adjustment that allows for the maintenance of farming use of the majority of the site, thereby mitigating the effects of an additional RBP by repeating the established development pattern of smaller residential lots balanced by larger agricultural lots. This will result in a low impact design.

Subdivision Design

c. The extent to which the location of future buildings, ancillary elements and the landscape treatment complements the existing landscape character, visual amenity values and wider amenity values of the Wakatipu Basin Rural Amenity Zone or Wakatipu Basin Lifestyle Precinct, including consideration of:

- ***i. the retention of existing vegetation and landform patterns;***
- ***ii. the alignment of lot boundaries in relation to landform and vegetation features and neighbouring development;***
- ***iii. earth mounding, and framework planting to integrate buildings and access ways;***
- ***iv. planting of appropriate species that are suited to the general area having regard to the matters set out in Schedule 24.8-Landscape Character Units;***

v. riparian restoration planting;

vi. the retirement and restoration planting of steep slopes over 15 degrees to promote slop stabilization and indigenous vegetation enhancement;

vii. how controls addressing such matters as building height, building colours and materials, building coverage, earthworks, retaining, fencing, gates, access ways (including paving materials), external lighting, domestic infrastructure (including water tanks), vegetation removal, and proposed plantings might be incorporated in the development in a manner ensuring ongoing compliance;

viii. the integration of existing and provision for new public walkways and cycle way/bridle paths.

The site does not contain any waterways , and there is no provision for public walkways, cycle ways or bridle paths. Landform patterns are clearly visible and will not be obstructed or modified by the proposed subdivision.

Existing vegetation includes either Crack or Grey Willows in the gully that forms the northern and north-western boundary, and two small areas of Matagouri. It is preferable that the willows are removed as they are invasive wilding species. Additional planting will be required in place of the willows to maintain the level of screening of a future house that the Willows currently provide. The Matagouri will form part of the proposed Lot 20 and there is no indication in the application as to whether this vegetation will be removed or retained.

The proposed planting to integrate a future house, as described previously in this report is appropriate to the general area.

There are no steep slopes on the site over 15 degrees.

Proposed boundaries do not follow vegetation features or landform. There is one proposed boundary which follows an existing farm fence line at the toe of a slope which complements and fits into the existing landscape character and land use pattern. All other boundaries are existing.

Controls have been proposed for planting, building colours, materials, external lighting, structures, fences etc. which are likely to ensure ongoing compliance.

d. The extent to which existing covenants or consent notice conditions need to be retained or are otherwise integrated into the conditions governing the proposed development so as to ensure that landscape character and visual amenity values are maintained or enhanced.

No existing covenants or consent notices are attached to the site and no covenants or consent notice conditions are proposed by the applicant.

e. The extent to which the development maintains visual amenity from public places and neighbouring properties.

As described in Section 6 of this report the visual amenity will be affected from adjacent neighbours however the degree of magnitude will be negligible to slight. The effect from public places, also as described in Section 6 of this report will be negligible from the Crown Terrace Road and moderate from Eastburn Road . The effect is greater from a short section of Eastburn Road adjacent to the site only.

f. Whether clustering of future buildings or varied allotment sizes as part of subdivision design would offer a better solution for maintaining a sense of openness and spaciousness, or the integration of development with existing landform, vegetation or settlement patterns.

The subdivision is a single lot and the adjustment of the boundaries between proposed Lot 20 and proposed Lot 33 will maintain the sense of openness and spaciousness by increasing the size of Lot 20.

g. The extent to which the development avoids, remedies or mitigates adverse effects on the features, elements and patterns that contribute to the value of adjacent or nearby ONLs and ONFs. This includes consideration of an appropriate setback from such features as well as the maintenance of views from public roads and other public places to the surrounding ONL and ONF context.

As described previously in this report the proposed subdivision will have very low adverse effects on the adjacent ONL of the slopes of the Crown Terrace due to the buffer of mitigation planting and the context below Eastburn Road of the built elements of the nearby homestead node at 108 Eastburn Road.

The mitigation planting will maintain views to the surrounding ONF and ONL context as the proposed species will grow to approximately the height of a future house, allowing views over the top of the planting to the mountains beyond.

h. The extent to which development adversely affects Escarpment, Ridgeline and River Cliff Features shown on the planning maps, and in particular the visual amenity values of those features in views from public places outside of the Wakatipu Basin Lifestyle Precinct.

The site does not contain any of those elements, nor will it affect any of those elements in the wider landscape.

i. Whether mitigation elements such as a landscape management plan or proposed plantings should be subject to bonds and consent notices.

A management plan is not required as the area of planting is small. A bond would be appropriate to ensure the planting is completed to the standard described on the plan and in the design controls.

j. Whether the layout of reserves and access ways provides for adequate public access and use.

No reserves or access ways are proposed.

k. Whether the proposed subdivision provides an opportunity to maintain landscape character and visual amenity through the registration of covenants or consent notices requiring open space to be maintained in perpetuity.

There are no covenants or consent notices proposed by the applicant to maintain the open space on proposed Lot 20. Given the development that has occurred around the site on neighbouring land and land owned by the applicant, a covenant or consent notice to prevent further subdivision and erection of residential houses and associated structures would be beneficial to maintain the views of the open paddocks and the balance of visual amenity and character of small lots balanced by larger, farmed lots.

Natural Environment and Cultural Values

aa. Considering the extent to which the subdivision provides for ecological restoration and enhancement. Ecological enhancement may include enhancement of existing vegetation, replanting and weed and pest control.

The proposed mitigation planting comprises indigenous species and will provide a small element of ecological enhancement to the site and wider landscape.

bb. Assessing the extent to which the subdivision and subsequent land use on the proposed site(s) adversely affects the historical, cultural or spiritual significance of any site or waahi tapu of significance to iwi.

As far as I am aware the site contains no elements of historical, cultural or spiritual significance to iwi.

cc. Assessing the extent to which the subdivision design and layout preserves and enhances areas of archaeological, cultural or spiritual significance.

As above as far as I am aware the site does not contain any areas of archaeological, cultural or spiritual significance.

dd. assessing the extent to which the integrity of any identified heritage feature(s) is maintained and enhanced.

There are no identified historic features on the site.

ee. Considering the benefits of the removal of identified wilding exotic trees.

The Crack or Grey Willows in the shallow gully on the northern and north-western boundary are wilding exotic species as per Rule 34.4.2 of the PDP. Removal of the willow trees would be beneficial in that it would remove a weed source from the gully that potentially feeds into waterways further west and down the face of the Crown terrace.

Earthworks and Hazards.

gg. Considering the extent to which earthworks are likely to have adverse effects on landscape character or visual amenity values which cannot be avoided, remedied or mitigated.

No earthworks are proposed in the application. Earthworks will be required for a future house due to the sloping nature of the RBP location. At this stage the effects of those earthworks cannot be assessed as the extent cannot be determined. Any potential effects can be mitigated by ensuring earthworks do not extend across the site beyond the curtilage area.

11.0 Conclusion

In conclusion I agree with the Patch Ltd report that the proposed RBP will result in no more than low adverse effects on landscape character and will be visually absorbed within the patterns and processes of the landscape and will not adversely effect visual amenity values to a more than low degree (Patch Ltd report) or moderate to negligible in my opinion. The landscape effect in my opinion will be low because it mimics an existing development pattern and the proposed RBP is an element that is not uncharacteristic of the receiving landscape.
In my opinion the proposal is appropriate and can be absorbed by the landscape resulting in effects that will be less than minor.

ATTACHMENT A: SUGGESTED CONDITIONS OF CONSENT

1. Any exterior lighting shall be kept within the curtilage area.
2. The Willows in the gully on the northern and north-western boundary of the site shall be removed.
3. The landscape plan *'Lot 33 – Lawn- East burn Landscape Plan-9 June 2020'* produced by Patch Ltd shall be expanded to include grades and quantities of the proposed species including extended the line of Lawson's Cypress as far to the west as is needed to screen a future house on the RBP from northern views from Eastburn Road and Lot 3 DP 336049.
4. All planting shown on the landscape plan *Lot 33 – Lawn- East burn Landscape Plan-9 June 2020'* produced by Patch Ltd shall be completed in the first planting season occurring at the completion of the house.
5. All planting shall be irrigated, protected from animal damage and kept weed free. All plants that die or become diseased shall be replaced with the same species within the next planting season.
6. There shall be no planting outside of the curtilage area beyond what is shown on the landscape plan *'Lot 33 – Lawn- East burn Landscape Plan-9 June 2020'* produced by Patch Ltd.
7. No structures shall be erected outside of the curtilage area.
8. Any accessory buildings shall be restricted to the building platform.
9. All earthworks for a future house and associated domestic elements, with exception of the driveway, shall be contained within the curtilage area.

ATTACHMENT B: DEFINITION OF THE DEGREES OF MAGNITUDE/VISUAL AMENITY

ATTACHMENT C: DEFINIITON OF MAGNITUDE OF LANDSCAPE EFFECTS

APPENDIX 4 RELEVANT OBJECTIVES AND POLICIES

APPENDIX 4 – OBJECTIVES AND POLICIES – RM200240

For completeness, the below appendix contains full list of the relevant Objectives and Policies for resource consent RM200240 that were shortened in the s42A report.

OPERATIVE DISTRICT PLAN

Section 4 – District-wide Issues

1 Objective (4.2.5)
Subdivision, use and development being undertaken in the District in a manner which avoids, remedies or mitigates adverse effects on landscape and visual amenity values.

1. Future Development

(a) To avoid, remedy or mitigate the adverse effects of development and/or subdivision in those areas of the District where the landscape and visual amenity values are vulnerable to degradation.

(b) To encourage development and/or subdivision to occur in those areas of the District with greater potential to absorb change without detraction from landscape and visual amenity values.

(c) To ensure subdivision and/or development harmonises with local topography and ecological systems and other nature conservation values as far as possible.

3. Outstanding Natural Landscapes (Wakatipu Basin)

(a) To avoid subdivision and development on the outstanding natural landscapes and features of the Wakatipu Basin unless the subdivision and/or development will not result in adverse effects which will be more than minor on:

(i) *Landscape values and natural character; and*

(ii) *Visual amenity values*

- *recognising and providing for:*

(iii) *The desirability of ensuring that buildings and structures and associated roading plans and boundary developments have a visual impact which will be no more than minor, which in the context of the landscapes of the Wakatipu basin means reasonably difficult to see;*

(iv) *The need to avoid further cumulative deterioration of the Wakatipu basin's outstanding natural landscapes;*

(v) *The importance of protecting the naturalness and enhancing the amenity values of views from public places and public roads.*

(vi) *The essential importance in this area of protecting and enhancing the naturalness of the landscape.*

(b) To maintain the openness of those outstanding natural landscapes and features which have an open character at present.

(c) To remedy or mitigate the continuing effects of past inappropriate subdivision and/or development.

4. Visual Amenity Values

(a) To avoid, remedy or mitigate the adverse effects of subdivision and development on the visual amenity landscapes which are:

- *highly visible from public places and other places which are frequented by members of the public generally (except any trail as defined in this Plan); and*
- *visible from public roads.*

(b) To mitigate loss of or enhance natural character by appropriate planting and landscaping.

(c) To discourage linear tree planting along roads as a method of achieving (a) or (b) above.

6. Urban Development

(a) To avoid new urban development in the outstanding natural landscapes of Wakatipu basin.

(b) To discourage urban subdivision and development in the other outstanding natural landscapes (and features) and in the visual amenity landscapes of the district.

(c) To avoid remedy and mitigate the adverse effects of urban subdivision and development where it does occur in the other outstanding natural landscapes of the district by:

- *maintaining the open character of those outstanding natural landscapes which are open at the date this plan becomes operative;*
- *ensuring that the subdivision and development does not sprawl along roads.*

(d) To avoid remedy and mitigate the adverse effects of urban subdivision and development in visual amenity landscapes by avoiding sprawling subdivision and development along roads.

8. Avoiding Cumulative Degradation

In applying the policies above the Council's policy is:

(a) to ensure that the density of subdivision and development does not increase to a point where the benefits of further planting and building are outweighed by the adverse effect on landscape values of over domestication of the landscape.

(b) to encourage comprehensive and sympathetic development of rural areas.

9. Structures

To preserve the visual coherence of:

(a) outstanding natural landscapes and features and visual amenity landscapes by:

- *encouraging structures which are in harmony with the line and form of the landscape;*
- *avoiding, remedying or mitigating any adverse effects of structures on the skyline, ridges and prominent slopes and hilltops;*

- *encouraging the colour of buildings and structures to complement the dominant colours in the landscape;*

- *encouraging placement of structures in locations where they are in harmony with the landscape;*

- *promoting the use of local, natural materials in construction.*

(b) visual amenity landscapes

- *by screening structures from roads and other public places by vegetation whenever possible to maintain and enhance the naturalness of the environment; and*

(c) All rural landscapes by

- *limiting the size of signs, corporate images and logos*

- *providing for greater development setbacks from public roads to maintain and enhance amenity values associated with the views from public roads.*

11. Forestry and Amenity Planting

Subject to policy 16, to maintain the existing character of openness in the relevant outstanding natural landscapes and features of the district by:

(a) encouraging forestry and amenity planting to be consistent with patterns, topography and ecology of the immediate landscape.

(b) encouraging planting to be located so that vegetation will not obstruct views from public roads and discouraging linear planting near boundaries of public roads.

12. Transport Infrastructure

To preserve the open nature of the rural landscape by:

- *encouraging the location of roads, car parks and tracks along the edges of existing landforms and vegetation patterns.*

- *encouraging shoreline structures, such as jetties, to be located only where they are visually contained by the topography, e.g. coves or bays.*

- *by encouraging imaginative roading designs including a range of carriageway widths, different surface materials, grass berms and protection of existing mature trees where these can enhance the quality of design and the visual experience.*

- *discouraging roads and tracks on highly visible slopes.*

- *requiring that all construction be with minimum cut and fill batters and that all batters be shaped in sympathy with, existing landforms.*

- *requiring that all disturbed areas be revegetated at the end of construction.*

- *encouraging where appropriate car parks to be screened from view.*

- *requiring the adverse effects of large expanses of hard surface car parks be avoided by planting and earthworks.*

15. Retention of Existing Vegetation

To maintain the visual coherence of the landscape and to protect the existing levels of natural character by:

(a) Encouraging the retention of existing indigenous vegetation in gullies and along watercourses;

(b) Encouraging maintenance of tussock grass-lands and other nature ecosystems[3] in outstanding natural landscapes

[3] to Section 4.1 on nature conservation values

16. Wilding Trees

To minimise the adverse effect of wilding trees on the landscape by:

- *supporting and encouraging co-ordinated action to control existing wilding trees and prevent further spread.*

17. Land Use

To encourage land use in a manner which minimises adverse effects on the open character and visual coherence of the landscape.

PROPOSED DISTRICT PLAN

Chapter 27 – Subdivision and Development

27.2.5 Objective - Infrastructure and services are provided to new subdivisions and developments.

Policies

Transport, Access and Roads

27.2.5.1 *Integrate subdivision roading with the existing road networks in a safe and efficient manner that reflects expected traffic levels and the provision for safe and convenient walking and cycling.*

For the purposes of this policy, reference to 'expected traffic levels' refers to those traffic levels anticipated as a result of the zoning of the area in the District Plan.

27.2.5.2 *Ensure safe and efficient pedestrian, cycle and vehicular access is provided to all lots created by subdivision and to all developments.*

27.2.5.3 *Provide linkages to public transport networks, and to trail, walking and cycling networks, where useful linkages can be developed.*

27.2.5.4 *Ensure the physical and visual effects of subdivision and roading are minimised by utilising existing topographical features.*

27.2.5.5 *Ensure appropriate design and amenity associated with roading, vehicle access ways, trails and trail connections, walkways and cycle ways are provided for within subdivisions by having regard to:*

a. the location, alignment, gradients and pattern of roading, vehicle parking, service lanes, access to lots, trails, walkways and cycle ways, and their safety and efficiency;

b. the number, location, provision and gradients of access ways and crossings from roads to lots for vehicles, cycles and pedestrians, and their safety and efficiency;

c. the standard of construction and formation of roads, private access ways, vehicle crossings, service lanes, walkways, cycle ways and trails;

d. the provision and vesting of corner splays or rounding at road intersections;

e. the provision for and standard of street lighting, having particular regard to siting and location, the provision for public safety and the avoidance of upward light spill adversely affecting views of the night sky;

f. the provision of appropriate tree planting within roads in urban areas;

g. any requirements for widening, formation or upgrading of existing roads;

h. any provisions relating to access for future subdivision on adjoining land;

i. the provision and location of public transport routes and bus shelters in urban areas.

Water supply, stormwater, wastewater

27.2.5.6 *All new lots shall be provided with connections to a reticulated water supply, stormwater disposal and/or sewage treatment and disposal system, where such systems are available or should be provided for.*

Water

27.2.5.7 *Ensure water supplies are of a sufficient capacity, including fire fighting requirements, and of a potable standard, for the anticipated land uses on each lot or development.*

27.2.5.8 *Encourage the efficient and sustainable use of potable water by acknowledging that the Council's reticulated potable water supply may be restricted to provide primarily for*

households' living and sanitation needs and that water supply for activities such as irrigation and gardening may be expected to be obtained from other sources.

27.2.5.9 Encourage initiatives to reduce water demand and water use, such as roof rain water capture and use and greywater recycling.

27.2.5.10 Ensure appropriate water supply, design and installation by having regard to:

a. the availability, quantity, quality and security of the supply of water to the lots being created;

b. water supplies for fire fighting purposes;

c. the standard of water supply systems installed in subdivisions, and the adequacy of existing supply systems outside the subdivision;

d. any initiatives proposed to reduce water demand and water use.

Stormwater

27.2.5.11 Ensure appropriate stormwater design and management by having regard to:

a. any viable alternative designs for stormwater management that minimise run-off and recognises stormwater as a resource through re-use in open space and landscape areas;

b. the capacity of existing and proposed stormwater systems.

c. the method, design and construction of the stormwater collection, reticulation and disposal systems, including connections to public reticulated stormwater systems;

d. the location, scale and construction of stormwater infrastructure;

e. the effectiveness of any methods proposed for the collection, reticulation and disposal of stormwater run-off, including opportunities to maintain and enhance water quality through the control of water-borne contaminants, litter and sediments, and the control of peak flow.

27.2.5.12 Encourage subdivision design that includes the joint use of stormwater and flood management networks with open spaces and pedestrian/cycling transport corridors and recreational opportunities where these opportunities arise and will maintain the natural character and ecological values of wetlands and waterways.

Wastewater

27.2.5.13 Treat and dispose of sewage in a manner that:

a. maintain public health;

b. avoids adverse effects on the environment in the first instance; and

c. *where adverse effects on the environment cannot be reasonably avoided, mitigates those effects to the extent practicable.*

27.2.5.14 Ensure appropriate sewage treatment and disposal by having regard to:

a. *the method of sewage treatment and disposal;*

b. *the capacity of, and impacts on, the existing reticulated sewage treatment and disposal system;*

c. *the location, capacity, construction and environmental effects of the proposed sewage treatment and disposal system.*

27.2.5.15 Ensure that the design and provision of any necessary infrastructure at the time of subdivision takes into account the requirements of future development on land in the vicinity.

Energy Supply and Telecommunications

27.2.5.16 Ensure adequate provision is made for the supply and installation of reticulated energy, including street lighting, and communication facilities for the anticipated land uses while:

a. *providing flexibility to cater for advances in telecommunication and computer media technology, particularly in remote locations;*

b. *ensure the method of reticulation is appropriate for the visual amenity and landscape values of the area by generally requiring services are underground, and in the context of rural environments where this may not be practicable, infrastructure is sited in a manner that minimises visual effects on the receiving environment;*

c. *generally require connections to electricity supply and telecommunications systems to the boundary of the net area of the lot, other than lots for access, roads, utilities and reserves.*

Easements

27.2.5.17 Ensure that services, shared access and public access is identified and managed by the appropriate easement provisions.

27.2.5.18 Ensure that easements are of an appropriate size, location and length for the intended use of both the land and easement.

APPENDIX 5 RECOMMENDED CONDITIONS OF CONSENT

APPENDIX 5 – RECOMMENDED CONSENT CONDITIONS – RM200240

APPENDIX 5 – RM200240 – DECISIONS 1 (A) & (B)

DECISION 1 (A): SUBDIVISION CONDITIONS

General Conditions

1. That the development must be undertaken/carried out in accordance with the plans:

   - *Proposed Subdivision Lot 20, Lot 5 LT 532665 & Lot 33 DP 417257 Eastburn Road Crown Terrace.* Prepared by Aurum Survey Consultants and dated 20 January 2020. Drawing & Issue No. 3720-8R-2C.
   - *Proposed Platform Eastburn Road Wakatipu.* Prepared by Aurum Survey Consultants and dated 9 November 2020. Drawing & Issue No. 3720-6R-1E.
   - *Lot 33 – Lawn – Eastburn Landscape Plan* prepared by Patch Landscape Design Architecture Planning. Dated 9 June 2020. Reference: PA18275 IS08.

   Stamped as approved on XX February 2021

   and the application as submitted, with the exception of the amendments required by the following conditions of consent.

2. This consent shall not be exercised and no work or activity associated with it may be commenced or continued until the following charges have been paid in full: all charges fixed in accordance with section 36(1) of the Resource Management Act 1991 and any finalised, additional charges under section 36(3) of the Act.

Environmental Management, Engineering and Landscaping

General

3. All engineering works shall be carried out in accordance with the Queenstown Lakes District Council's policies and standards, being QLDC's Land Development and Subdivision Code of Practice adopted on 3rd May 2018 and subsequent amendments to that document up to the date of issue of any resource consent. Current version 1.1.

   Note: The current standards are available on Council's website via the following link: https://www.qldc.govt.nz

To be completed prior to the commencement of any works on-site

4. Prior to any works commencing on site the Consent Holder shall complete the Short Form Environmental Management Plan.

   https://www.qldc.govt.nz/media/vprartis/emp-short-form-template-for-environmental-management-plans-small-scale-builds-june-2019.pdf

   At all times during the works, environmental management measures onsite shall be installed and carried out in accordance with this document.

5. Prior to commencing ground-disturbing activities, the Consent Holder shall nominate an Environmental Representative for the works program in accordance with the requirements detailed on pages 9 and 10 of the *Queenstown Lakes District Council's Guidelines for Environmental Management Plans.*

6. Prior to commencing ground disturbing activities, the Consent Holder shall ensure that all staff (including all sub-contractors) involved in, or supervising, works onsite have attended an Environmental Site Induction in accordance with the requirements detailed on page 8 of the *Queenstown Lakes District Council's Guidelines for Environmental Management Plans.*

7. The EMP shall be accessible on site at all times during work under this consent.

8. In accordance with page 9 of the *Queenstown Lakes District Council's Guidelines for Environmental Management Plans*, where any Environmental Incident where the EMP has failed leading to any adverse environmental effects offsite occurs the Consent Holder shall report to QLDC details of any Environmental Incident within 12 hours of becoming aware of the incident.

9. The owner of the land being developed shall provide a letter to the Manager of Resource Management Engineering at Council advising who their representative is for the design and execution of the engineering works and construction works required in association with this development and shall confirm that these representatives will be responsible for all aspects of the works covered under Sections 1.7 & 1.8 of QLDC's Land Development and Subdivision Code of Practice, in relation to this development.

10. Prior to commencing works on the site, the consent holder shall obtain 'Engineering Review and Acceptance' from the Queenstown Lakes District Council for development works to be undertaken and information requirements specified below. The application shall include all development items listed below unless a 'partial' review approach has been approved in writing by the Manager of Resource Management Engineering at Council. The 'Engineering Review and Acceptance' application(s) shall be submitted to the Manager of Resource Management Engineering at Council for review, prior to acceptance being issued. At Council's discretion, specific designs may be subject to a Peer Review, organised by the Council at the applicant's cost. The 'Engineering Review and Acceptance' application(s) shall include copies of all specifications, calculations, design plans and Schedule 1A design certificates as is considered by Council to be both necessary and adequate, in accordance with Condition (3), to detail the following requirements:

    a) Provision of a minimum supply of 2,100 litres per day of potable water to the building platform on Lot 33 that complies with/can be treated to consistently comply with the requirements of the Drinking Water Standard for New Zealand 2005 (Revised 2018). For all surface water or ground water takes this shall include the results of chemical test results no more than 5 years old and bacterial test results no more than 3 months old at the time of submitting the test results. The testing must be carried out by a Ministry of Health recognised laboratory (refer to http://www.drinkingwater.esr.cri.nz/mohlabs/labmain.asp) and be accompanied by a laboratory report with non-compliances highlighted and outlining any necessary remedial means of remedial treatment.

    b) The provision of a sealed vehicle crossing to Lot 20 from Eastburn Road to be in terms of Diagram 2, Appendix 7 of the District Plan. This shall be trafficable in all weathers and be capable of withstanding an axle load of 8.2 tonnes or have a load bearing capacity of no less than the public roadway serving the property, whichever is the lower. Provision shall be made to continue any roadside drainage.

    c) The provision of an access way to Lot 33 that complies with the guidelines provided for in QLDC's Land Development and Subdivision Code of Practice. The access shall have a minimum formation standard of 150mm compacted AP40 with a 3.5m minimum carriageway width. Provision shall be made for stormwater disposal from the carriageway.

    d) The provision of Design Certificates for all engineering works associated with this subdivision submitted by a suitably qualified design professional (for clarification this shall include all Roads and Water reticulation). The certificates shall be in the format of the QLDC's Land Development and Subdivision Code of Practice Schedule 1A Certificate.

11. The consent holder shall obtain and implement a traffic management plan approved by Council prior to undertaking any works within or adjacent to Council's road reserve that affects the normal operating conditions of the road reserve through disruption, inconvenience or delay. The Traffic Management Plan shall be prepared by a Site Traffic Management Supervisor (STMS). All contractors obligated to implement temporary traffic management plans shall employ a qualified STMS to manage the site in accordance with the requirements of the NZTA's "*Traffic Control*

Devices Manual Part 8: Code of practice for temporary traffic management". The STMS shall implement the Traffic Management Plan. A copy of the approved plan shall be submitted to the Manager of Resource Management Engineering at Council prior to works commencing.

12. Prior to commencing any work on the site the consent holder shall install measures to control and/or mitigate any dust, silt run-off and sedimentation that may occur, in accordance with QLDC's Land Development and Subdivision Code of Practice to ensure that neighbouring sites remain unaffected from earthworks. These measures shall be implemented **prior to** the commencement of any earthworks on site and shall remain in place for the duration of the project, until all exposed areas of earth are permanently stabilised.

To be monitored throughout earthworks

13. The earthworks and batter slopes shall be undertaken in accordance with the recommendations of the report by GeoSolve ('*Geotechnical Report. Lot 33 DP 417527, 106 Eastburn Road, Queenstown.'* GeoSolve ref 200605, dated 20/10/2020).

14. The consent holder shall implement suitable measures to prevent deposition of any debris on surrounding roads by vehicles moving to and from the site. In the event that any material is deposited on any roads, the consent holder shall take immediate action, at his/her expense, to clean the roads. The loading and stockpiling of earth and other materials shall be confined to the subject site.

15. No earthworks, temporary or permanent, are to breach the boundaries of the site, except for the works required to construct an approved vehicle crossing and provide a power connection to the site.

16. Hours of operation for earthworks, shall be:

    - Monday to Saturday (inclusive): 7.30am to 6.00pm.
    - Sundays and Public Holidays: No Activity.

    No machinery shall start up or operate earlier than 7.30am. All activity on the site is to cease by 6.00pm.

To be completed before Council approval of the Survey Plan

17. Prior to the Council signing the Survey Plan pursuant to Section 223 of the Resource Management Act 1991, the consent holder shall complete the following:

    a) All necessary easements shall be shown in the Memorandum of Easements attached to the Survey Plan and shall be duly granted or reserved.

    b) The Survey Plan shall show the location of the Building Platform on proposed Lot 33 as Covenant Area XX.

    Advice Note: Covenant Area XX above may ultimately be referenced differently given there will already be an Area XX on the Survey Plan, as per the requirements in c) below.

    c) Areas XX, C, AJ, BA & BB as shown on Deposited Plan 550017 shall also be shown on the Survey Plan for this application.

    Advice Note: These areas relate to the consent notice restrictions from RM180960 that will draw down to proposed Lot 20 of this application. While the consent notice will still reference DP 550017, the areas are to be shown on the new survey plan for completeness. An advice note should also be included on the Survey Plan to that effect, noting the areas are subject to a Land Covenant (Consent Notice).

To be completed before issue of the s224(c) certificate

18. All existing willow trees along the northern boundary of proposed Lot 33 shall be removed. This includes any Grey Willow and Crack Willow. They shall not be replaced.

19. The landscape plan referenced in Condition (1), being *Lot 33 – Lawn – Eastburn Landscape Plan,* shall be expanded to include grades and quantities of the proposed species including extending the line of Lawson's Cypress as far to the west as is needed within proposed Lot 33 to screen the building platform from northern views from Eastburn Road and Lot 3 Deposited Plan 336049.

20. The expanded landscape plan referenced in Condition (19) above, less the willows removed as per Condition (18), shall be implemented and completed prior to issue of 224c for the subdivision.

    Advice Note: this condition may be bonded.

21. Prior to 224c certification, evidence shall be provided to Council that Survey Plan LT 550017 has been deposited and the associated Records of Titles have been issued. That is, a s224(c) certificate shall have been issued stating that all of the conditions of the consents have been complied with.

    Advice Note: the above condition seeks to ensure that the subdivision approved under RM180960 has been completed prior to this application proceeding. This application is reliant on that subdivision being completed first.

22. Prior to certification pursuant to section 224(c) of the Resource Management Act 1991, the consent holder shall complete the following:

    a) The consent holder shall provide 'as-built' plans and information required to detail all engineering works completed in relation to or in association with this subdivision to the Manager of Resource Management Engineering at Council. This information shall be formatted in accordance with Council's 'as-built' standards and shall include all Water reticulation (including private laterals and toby positions).

    b) A digital plan showing the location of all building platforms as shown on the Land Transfer Plan shall be submitted to the Manager of Resource Management Engineering at Council. This plan shall be in terms of New Zealand Transverse Mercator 2000 coordinate system (NZTM2000), NZGDM 2000 datum.

    c) The completion and implementation of all works detailed in Condition (10) above.

    d) Written confirmation shall be provided from the electricity network supplier responsible for the area, that provision of an underground electricity supply has been made available (minimum supply of single phase 15kVA capacity) to the development and that all the network supplier's requirements for making such means of supply available have been met.

    e) The submission of Completion Certificates from both the Contractor and Approved Engineer for all engineering works completed in relation to or in association with this subdivision (for clarification this shall include all Roads and Water reticulation). The certificates shall be in the format of a Producer Statement, or the QLDC's Land Development and Subdivision Code of Practice Schedule 1B and 1C Certificate.

Ongoing Conditions/Consent Notices

23. In the event that the Engineering Acceptance issued under Condition (10) contains ongoing conditions or requirements associated with the installation, ownership, monitoring and/or maintenance of any infrastructure subject to Engineering Acceptance, then at Council's discretion, a consent notice (or other alternative legal instrument acceptable to Council) shall be registered on the relevant Records of Title detailing these requirements for the lot owner(s). The final form and wording of the document shall be checked and approved by Council's solicitors at the consent holder's expense prior to registration to ensure that all of the Council's interests and liabilities are adequately protected. The applicant shall liaise with the Subdivision Planner and/or

Manager of Resource Management Engineering at Council in respect of the above. All costs, including costs that relate to the checking of the legal instrument by Council's solicitors and registration of the document, shall be borne by the applicant.

Note: This condition is intended to provide for the imposition of a legal instrument for the performance of any ongoing requirements associated with the ownership, monitoring and maintenance of any infrastructure within this development that have arisen through the detailed engineering design and acceptance process, to avoid the need for a consent variation pursuant to s.127 of the Resource Management Act.

24. The following conditions of the consent shall be complied with in perpetuity and shall be registered on the Title of proposed Lot 33 by way of Consent Notice pursuant to s.221 of the Act:

Engineering

a) All future buildings shall be contained within the Building Platform as shown as Covenant Area XX as shown on Land Transfer Plan XXXXXX.

Advice Note: Area XX may be referenced differently as per the advice note under Condition 17 b) above. This consent notice restriction shall match the reference ultimately imposed by that condition.

b) At the time a residential unit is erected on the lot, the owner for the time being shall engage a suitably experienced person as defined in sections 3.3 & 3.4 of AS/NZS 1547:2012 to design an onsite effluent disposal system in compliance with AS/NZS 1547:2012. The design shall take into account the site and soils investigation report and recommendations by Civilised Limited, dated 17 February 2020, including the recommendation to provide secondary treatment to effluent prior to discharge to ground. The proposed wastewater system shall be subject to Council review prior to implementation and shall be installed prior to occupation of the residential unit.

The wastewater disposal field shall be blocked off to vehicular traffic and stock. This shall be achieved through use of a physical barrier, such as fencing or other suitable measures that will prevent vehicles and stock from passing over the disposal area.

c) The drinking water supply is to be monitored in compliance with the Drinking Water Standards for New Zealand 2005 (revised 2018), by the consent holder, and the results forwarded to the Environmental Health Team Leader at Council. The Ministry of Health shall approve the laboratory carrying out the analysis. Should the water not meet the requirements of the standard then the consent holder shall be responsible for the provision of water treatment to ensure that the Drinking Water Standards for New Zealand 2005 are met or exceeded.

d) At the time a residential unit is erected on the lot, the owner for the time being shall construct an access way to the residential unit that complies with the guidelines provided for in QLDC's Land Development and Subdivision Code of Practice. The access shall have a minimum formation standard of 150mm compacted AP40 with a 3.5m minimum carriageway width. Provision shall be made for stormwater disposal from the carriageway.

e) Prior to the occupation of any residential unit on the lot, domestic water and firefighting storage is to be provided. A minimum of 45,000 litres shall be maintained at all times as a static firefighting reserve within a 55,000 litre combination of tanks tank (or alternative). Alternatively, a 7,000 litre firefighting reserve is to be provided for each residential unit in association with a domestic sprinkler system installed to an approved standard. A firefighting connection in accordance with Appendix B - SNZ PAS 4509:2008 is to be located no further than 90 metres, but no closer than 6 metres, from any proposed building on the site. Where pressure at the connection point/coupling is less than 100kPa (a suction source - see Appendix B, SNZ PAS 4509:2008 section B2), a 100mm Suction Coupling (Female) complying with NZS 4505, is to be provided. Where pressure at the connection point/coupling is greater than 100kPa (a flooded source - see Appendix B, SNZ PAS

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

The FENZ connection point/coupling must be located so that it is not compromised in the event of a fire.

The connection point/coupling shall have a hardstand area adjacent to it that is suitable for parking a fire service appliance. The hardstand area shall be located in the centre of a clear working space with a minimum width of 4.5 metres. Pavements or roadways providing access to the hardstand area must have a minimum formed width as required by QLDC's standards for rural roads (as per QLDC's Land Development and Subdivision Code of Practice adopted on 3rd May 2018 and subsequent amendments to that document up to the date of issue of any subdivision consent). The roadway shall be trafficable in all weathers and be capable of withstanding an axle load of 8.2 tonnes or have a load bearing capacity of no less than the public roadway serving the property, whichever is the lower. Access shall be maintained at all times to the hardstand area.

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

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

Firefighting water supply may be provided by means other than the above if the written approval of the Fire and Emergency New Zealand Fire Risk Management Officer is obtained for the proposed method.

The firefighting water supply tank and/or the sprinkler system shall be installed prior to the occupation of the building.

Note: *Fire and Emergency New Zealand considers that often the best method to achieve compliance with SNZ PAS 4509:2008 is through the installation of a home sprinkler system in accordance with Fire Systems for Houses SNZ 4517:2010, in each new residential unit. Given that the proposed residential unit is are approximately 13km from the nearest FENZ Fire Station the response times of the New Zealand* ***Volunteer*** *Fire brigade in an emergency situation may be constrained. It is strongly encouraged that a home sprinkler system be installed in the new residential unit / building.*

f) The lot has not been provided with reticulated underground telecommunications services. Telecommunications for the lot will need to be obtained via alternative methods such as satellites or wireless. It will be the responsibility of the lot owner to provide the alternative telecommunication services to their lot. If the lot owner desires a hardwire connection, the cost and responsibility for this connection shall sit with the lot owner for time being, and any cables shall be located within an easement or road reserve, and shall be underground and in accordance with the network provider's requirement.

Building Controls

g) Building height shall not exceed 5.5m from the set RL of 648.5

h) The total footprint of all buildings on site on site shall not to exceed 500m^2.

i) No continuous length of any one elevation of a building shall exceed 12m.

j) All external walls, joinery, trims and attachments, gutters, spouting, downpipes, chimney, flues, satellite dishes and solar panels shall be coloured in the natural hues of green, brown or grey with a light reflectivity value of between 7% and 22%.

k) The roofing materials of all buildings shall be corrugate, or tray steel, shingles or cedar finished in dark recessive tones of grey, green or brown with a light reflective value of between 6% and 20%. A living roof of a vegetation coverage consistent with the surrounding landscape is also appropriate.

l) If painted, all exterior colours should have a matt finish.

m) All ancillary structures and buildings (for example: garden sheds and garages) shall be clad and coloured to match the principal dwelling.

n) All curtains, blinds or other window coverings (internal and external) are to match the exterior colour controls.

o) Solar panels shall only be installed where they are not visible from public roads or public walking tracks.

Landscape Controls

p) All planting implemented in accordance with landscape plans for resource consent RM200240 shall be maintained as per the landscape plan and the conditions of that consent to ensure healthy growth. All planting shall be irrigated, protected from animal damage and kept weed free. All plants that die or become diseased shall be replaced with the same species within the next available planting season.

q) There shall be no planting outside of the curtilage area beyond that which is shown on the approved landscape plan for RM200240.

r) All external landscape lighting shall be down lighting only and not be used to highlight buildings or landscape features visible from beyond the property boundary.

s) All external landscape lighting shall be no higher than 1.2m above ground level and be limited to the curtilage area only, as identified on the approved landscape plan for RM200240.

t) All external lighting shall be directed downwards and housed such that the light source (filament, LED) is not visible from beyond the residential curtilage area, as identified on the approved landscape plan for RM200240.

u) All domestic landscaping and structures including but not limited to clotheslines, outdoor seating areas, external lighting, play structures, vehicle parking, pergolas, and ornamental or amenity gardens and lawns shall be confined to the curtilage area as shown on the approved landscape plan for RM200240.

v) All water tanks to be partially or wholly buried. If partially buried, tanks shall be of dark recessive colouring which meets the building colour controls and/or visually screened by planting as to be not visible from beyond the subject property boundary.

w) Any entranceway structures from the property boundary shall be a maximum height of no more than 1.2m and shall be constructed of natural materials such as timber, steel or schist stone as to not be visually obtrusive (monumental) and consistent with traditional rural elements and farm gateways.

x) All earthworked/exposed areas shall be top-soiled and grassed/revegetated or otherwise permanently stabilised and vegetated to blend seamlessly into the natural landforms.

y) No concrete kerb and channelling shall be used for the access road and driveway.

z) All fencing to be post and rail and post and wire only.

25. Should any planting be required within proposed Lot 20 of this subdivision as a result of Condition 19 above (which necessitates extending the line of Lawson's Cypress as far to the west as is needed to screen the building platform within proposed Lot 33 from northern views from Eastburn Road and Lot 3 Deposited Plan 336049), a consent notice shall be registered on the Title of proposed Lot 20 to ensure the below requirement shall be complied with in perpetuity:

a) All planting implemented in accordance with landscape plans for resource consent RM200240 shall be maintained as per the landscape plan and conditions of that consent to ensure healthy growth. All planting shall be irrigated, protected from animal damage and kept weed free. All plants that die or become diseased shall be replaced with the same species within the next available planting season.

Advice Note

1. *This consent triggers a requirement for Development Contributions, please see the attached information sheet for more details on when a development contribution is triggered and when it is payable. For further information, please contact the DCN Officer at Council.*

2. *The existing consent notice registered on Lot 20 of RM180960 will draw down to Lot 20 of this application. It will not draw down to Lot 33 of this application. For completeness, it is recommended the consent holder liaise with Council's subdivision team at the time of subdivision to ensure the existing consent notice registers on the applicable Record of Title in this subdivision.*

For Your Information

Monitoring
The conditions in your decision will advise if monitoring is required. To assist with compliance of your resource consent, and to avoid your monitoring deposit being used before your development starts, please complete the "Notice of Works Starting Form" and email to the Monitoring Planner at RCMonitoring@qldc.govt.nz

Environmental Management Plan
Please be aware of your requirements to appropriately manage environmental effects associated with your activity. Site management means having adequate controls in place on your site. This will ensure compliance is achieved and harmful by-products of construction activities do not damage the environment or cause nuisance to neighbours. We've provided some advice to help you mitigate any possible adverse effects that may be generated on your site as a result of construction related activities.

Engineering Acceptance
You may also have conditions that require you to apply for Engineering Acceptance. To apply, please complete the Engineering Acceptance Application Form and submit to engineeringapprovals@qldc.govt.nz. Further information regarding Engineering Acceptance can be found here.

Development Contribution
If this decision requires a development contribution (DC) charge, we will be sending a notice in due course. To answer questions such as what is a DC charge, when a DC charge is triggered and timing of payments, this information is available here.
If you wish to make a DC estimate calculation yourself, please use this link. Full details on current and past policies can be found here.

APPENDIX 5 – RM200240 – DECISIONS 1 (A) & (B)

DECISION 1 (B): LAND USE CONDITIONS

General Conditions

1. That the development must be undertaken/carried out in accordance with the plans:

   - *Proposed Subdivision Lot 20, Lot 5 LT 532665 & Lot 33 DP 417257 Eastburn Road Crown Terrace.* Prepared by Aurum Survey Consultants and dated 20 January 2020. Drawing & Issue No. 3720-8R-2C.
   - *Proposed Platform Eastburn Road Wakatipu.* Prepared by Aurum Survey Consultants and dated 9 November 2020. Drawing & Issue No. 3720-6R-1E.
   - *Lot 33 – Lawn – Eastburn Landscape Plan* prepared by Patch Landscape Design Architecture Planning. Dated 9 June 2020. Reference: PA18275 IS08.

   Stamped as approved on XX February 2021

   and the application as submitted, with the exception of the amendments required by the following conditions of consent.

2. This consent shall not be exercised and no work or activity associated with it may be commenced or continued until the following charges have been paid in full: all charges fixed in accordance with section 36(1) of the Resource Management Act 1991 and any finalised, additional charges under section 36(3) of the Act.

3. The consent holder is liable for costs associated with the monitoring of this resource consent under Section 35 of the Resource Management Act 1991.

4. All land use activities authorised by way of this consent, being those authorising the removal of exotic vegetation over 4m in height, and those authorising a density breach associated with a future residential unit on proposed Lot 33 are to be undertaken in accordance with the conditions contained within RM200240: Decision 1(A).

Advice Note

1. This consent shall lapse 5 years after the date of commencement of the consent, as per the requirements under s125 of the RMA. That is, regardless of the timing of the subdivision, this consented density breach will lapse 5 years after the date of commencement of the consent.

For Your Information

Monitoring
The conditions in your decision will advise if monitoring is required. To assist with compliance of your resource consent, and to avoid your monitoring deposit being used before your development starts, please complete the "Notice of Works Starting Form" and email to the Monitoring Planner at RCMonitoring@qldc.govt.nz

Environmental Management Plan
Please be aware of your requirements to appropriately manage environmental effects associated with your activity. Site management means having adequate controls in place on your site. This will ensure compliance is achieved and harmful by-products of construction activities do not damage the environment or cause nuisance to neighbours. We've provided some advice to help you mitigate any possible adverse effects that may be generated on your site as a result of construction related activities.

Engineering Acceptance
You may also have conditions that require you to apply for Engineering Acceptance. To apply, please complete the Engineering Acceptance Application Form and submit to engineeringapprovals@qldc.govt.nz. Further information regarding Engineering Acceptance can be found here.

Development Contribution
If this decision requires a development contribution (DC) charge, we will be sending a notice in due course. To answer questions such as what is a DC charge, when a DC charge is triggered and timing of payments, this information is available here.
If you wish to make a DC estimate calculation yourself, please use this link. Full details on current and past policies can be found here.

SITE LANDSCAPE ARCHITECTS ^

Arrowtown, New Zealand
m 021 838 855
e rt@sitela.co.nz
w www.sitela.co.nz

Preservation Lane, Crown Terrace

Landscape Assessment – 2 Lot Subdivision and Proposed Building Platform

Richard Tyler Landscape Architect - NZILA Registered
SITE Landscape Architects

Prepared 3rd December 2021

1.0 Introduction

This report is to accompany resource consent application for a 2-lot subdivision and creation of a Building Platform to replace an existing Farm Building Platform at Lot 20 DP 561087 (lot 20), 108 Preservation Lane (off Eastburn Road), Crown Terrace. Lot 20 has an area of 43.2714 hectares.

In the Operative District Plan (ODP) the site is contained in the **Rural General Zone** and is classified as part Visual Amenity Landscape (VAL) and part Outstanding Natural Landscape (ONL).

In the Proposed District Plan (PDP) the site is zoned as part Rural Zone Stage 1 (RZ) and part **Wakatipu Basin Rural Amenity Zone** Stage 2 (WBRAZ). These zone boundaries are noted on the landscape concept plan for clarity.

2.0 Methodology

The author has visited the site on several occasions with height poles in place and driven the surrounding landscape viewing where views are available into the site.

To understand the consented history of the site in relation to landscape effects I have briefly reviewed the assessment reports contained within a number of background resource consents, as contained in the Assessment of Effects that has been produced by Southern Planning Group.

The rating scale for visual effects is derived from NZILA Best Practice Guide - Landscape Assessment and Sustainable Management version: 02.11.10 as follows:

Nil	Nil Effects	No effects – no effects at all (not able to be seen)
Negligible Very low	Less than Minor Adverse Effects	Adverse effects that are discernible day to-day effects, but too small to adversely affect other persons.
Low	Minor Adverse Effects	Adverse effects that are noticeable but will not cause any significant adverse impacts.
Moderate	More than Minor Adverse Effects	Adverse effects that are noticeable that may cause an adverse impact but could be potentially mitigated or remedied.
High Very High	Significant Adverse Effects that could be remedied or mitigated.	An effect that is noticeable and will have a serious adverse impact on the environment but could potentially be mitigated or remedied.
Extreme	Unacceptable Adverse Effects	Extensive adverse effects that cannot be avoided, remedied or mitigated.

Attached to this report in the appendix are:

Fig 1: Context Plan / Zone Map overlay

Fig 2: Landscape Plan

Figs 3-4: Views 1 & 2 from Crown Range Road

Fig 5: View 3 from neighbouring lot 8 – 45 Preservation Lane.

3.0 Proposal

The proposal is to subdivide the existing lot 20 to form a proposed lot 10 and lot 20. The existing lot 20 43.2714 hectares in area.

The proposed lot 20 (40.64Ha) will contain the existing residential farm buildings located near Eastburn Road. The proposed lot 10 (2.63Ha) will contain the proposed residential building platform (RBP) in place of the existing Farm Building Platform (FBP) as the FBP will be surrendered. The existing farm shed located within the FBP will be relocated prior to construction of a dwelling within the RBP.

The Assessment of Effects contains a list of building design controls and other controls that will govern the future use within Lot 10.
Additionally, the building height for proposed lot 10 RBP, consistent with the other existing surrounding lots is to be 5.5m above the original ground level. Maximum ground floor area shall be 500m2.

4.0 Site Description

The property is located at the southern end of the Crown Terrace, a broadly expansive glacial terrace with the Crown range rising above and the Arrow River and Kawarau Gorge at the base of the escarpment below. The Terrace is gently sloping to the south-west and is punctuated with incised gullies and rolling topography where streams have slowly eroded their way into the glacial bedrocks and gravels.

The proposal site makes up the northern extent of the original 8 lot subdivision, with the existing building platforms and consented farm cottage locations located to the south.

Existing landuse is predominantly grazed pasture / crops with mature hedgerows central to the flatter paddocks. An incised gully feature (and location of existing ecological protection area) follows the north-western boundary of site as it drains towards the Kawarau River.

The existing farm buildings located within proposed lot 20 are located adjacent to Eastburn Road at the eastern end of site. The proposed RBP within proposed lot 10 is located adjacent to a mature hedgerow towards the southern end of site and centrally located amongst the existing RBPs established under the original 8 lot subdivision (RM161179).

Proposed Lot 10 RBP with 5.5m height poles marked in yellow, viewing east towards Gibbston. The existing farm shed located within the FBP is beyond the poles. Behind that, the gap in the hedgerow is currently planted with infill species as per the original 8 lot consent (RM161179)

Proposed Lot 10 RBP with poles marked in yellow, taken from adjacent Lot 5 RBP viewing north-east with the Crown Range in the background. The existing hedgerow is directly behind the platform poles.

5.0 Landscape Character

The site and wider Crown Terrace exhibit an elevated open pastoral character to the greater part with a series of older hedgerows dividing the open paddocks, punctuated by incised gully features and rolling topography. Buildings are well screened from the highway by mature vegetation and topography which retains a largely un-built and raw mountain character.

The site falls within Landscape Character Unit 20: "Crown Terrace" of Schedule 24.8 of Chapter 24 in the PDP. The characteristics are as follows:

Landform patterns	*Elevated glacial terrace characterised by plateaus interspersed with rolling hummocky hills and includes the lower slopes of the Crown Range.*
Vegetation patterns	*Scattered exotic shelterbelts/hedgerows, shade trees, pockets of bush and patches of scrub in gullies. Exotic amenity plantings around dwellings in places. Exotic pasture grasses dominate.*
Hydrology	*Complex network of streams draining westwards across the terrace from the Crown Range to the Arrow River*
Proximity to ONL/ONF	*Surrounded by ONL (WB).*
Character Unit boundaries	*North: ONL (WB) toe of mountain range/study area boundary.* *East: ONL (WB) toe of mountain range/study area boundary.* *South: ONL (WB) top of escarpment/study area boundary.* *West: ONL (WB) top of escarpment/study area boundary.*
Land use	*Predominantly in rural production with loose groupings of rural residential development throughout the unit.*
Settlement patterns	*Relatively spacious rural residential development loosely grouped throughout the terrace and oriented to take advantage of the panoramic views out over the Wakatipu Basin. Relatively few existing dwellings. Numerous consented but unbuilt platforms evident (33). Rural buildings evident. Typical lots sizes> 20ha.*
Proximity to key route	*The Crown Range Road passes through the terrace and comprises an important scenic route linking Queenstown to Cardrona and Wanaka. Formalised scenic lookouts at various points.*
Heritage features	*Three heritage buildings/features identified in PDP.*
Recreation features	*No walkways/cycleways in the area.*
Infrastructure features	*No reticulated sewer or stormwater. Limited reticulated water.*
Visibility/prominence	*The elevated and relatively flat topography of the unit means that only its western edges are visible from the basin. The reasonably open character and flat to gently rolling landform pattern makes much of the unit highly visible from the Crown Range Road.*
Views	*Key views relate to the views across the terrace from the Crown Range Road to the Crown Range and wider Wakatipu Basin landscape, and views from the scenic lookouts out over the Wakatipu Basin*
Enclosure/openness	*Generally, the unit exhibits a relatively high degree of openness. The Crown Range provides a strong sense of enclosure to the east. The lower-lying large scale basin landscape to the west amplifies the perception of openness.*
Complexity	*Localised landform (hummocky hills) and vegetation patterns confer a reasonable degree of complexity in places.*
Coherence	*The legible and largely uncluttered landform patterning, in combination with the predominantly open pastoral character, contributes an impression of coherence. However, minimal interplay between landform and vegetation patterning.*

Naturalness	*A reasonably high degree of naturalness as a consequence of its predominantly open and pastoral character combined with its proximity to the vastly scaled and relatively undeveloped Crown Range landscape to the east. In the main, (existing) buildings tend to be well integrated by plantings serving to reduce their prominence*
Sense of Place	*Generally, the unit displays a working rural landscape character with a reasonably spacious patterning of rural residential development in places. The terrace serves as an important transition between the 'inhabited' Wakatipu Basin landscape and the relatively unmodified 'wilderness' landscape of the Crown Range to the east.*
Potential landscape issues and constraints associated with additional development	*The relatively open and exposed nature of the unit, in addition to its importance as a scenic route and as a transition between the Wakatipu Basin and the Crown Range, makes it highly sensitive to landscape change*
Potential landscape opportunities and benefits associated with additional development	*Riparian restoration potential. Potential integration of walkways/cycleways etc. Larger-scaled lots suggest potential for subdivision.*
Environmental characteristics and visual amenity values to be maintained and enhanced	*Sense of openness and spaciousness associated with a predominantly pastoral landscape. Dramatic views from the Crown Range Road to the Wakatipu Basin and surrounding mountain setting. Impression of the area as a transition between the inhabited basin landscape and the more 'wild' Crown Range mountain-scape to the east.*
Capability to absorb additional development	*Very low.*

6.0 Visual Effects Assessment

The proposal seeks to form a RBP in place of the existing FBP. The proposed platform is located adjacent to a mature hedgerow which is protected under the existing consent notice and will remain as such with the proposal.

Summary of Visibility:

The site and surrounds are intermittently visible from 2 locations lower down on the elevated Crown Range Road above site. From the flatter Crown Terrace to the north views of the platform will not be possible with vegetation and the underlying topography in the foreground.

From the infrequently travelled Eastburn Road the RBP is not visible owing to the multiple layers of protected hedgerows within site and neighbouring lots.

The hedgerow to the immediate north of the RBP is proposed to be retained at a minimum height of 8m. A proposed dwelling within the RBP is to be a maximum height of 5.5m which will ensure that a dwelling will not be visible from the elevated Crown Range Road if the hedgerow is topped to 8m in the future.

The proposed RBP will be visible from Lot 5 DP 550017,located directly to the south of the site. The owners of this property have provided Affected Party Approval for the proposal so potential effects from here will not be considered.

Lots 6 & 7 DP 532665 (36 & 34 Preservation Lane) located directly north of the site will have views towards the proposed RBP screened by the existing hedgerow and in the case of Lot 6 by foreground topography.

There will be intermittent views from the driveway of adjacent Lot 8 DP 532665, (45 Preservation Lane) of the proposed RBP until such time as the planted hedgerow grows to a height of 2m or more.

Other than this, the RBP will not be visible from any other surrounding properties. The remaining lots further to the west / south-west are on lower topography where views of the proposed RBP are not possible.

Residents at Neighbouring lot 6 DP 532665, 36 Preservation Lane:

Access to lot 6 is around the rear of lot 7 and down through a gully to the building platform. The platform sits within a shallow basin with the main view shaft towards the eastern flanks of the Remarkables and beyond to Ben Lomond in Queenstown. From the centre of the platform the foreground topography limits views towards the proposed RBP, with the hedgerow also screening any further views.

Landscape effects of the proposal from this property will be **negligible** as the proposed RBP will not be visible.

Residents at Neighbouring lot 7 DP 532665, 34 Preservation Lane:

Lot 7 is in the adjacent paddock to the north-east of site on the other side of the existing hedgerow. The building platform is 115m from the proposed RBP.

From here a building with the PBP may just be discernible through gaps in the hedgerow, under certain light conditions where the surrounding paddock is a lighter hue. It will appear as a darker shape filling the voids in gaps between the foliage and will be discernible to a small degree. There may be a level of noise associated with the proposed RBP that would draw attention to the fact that a platform exists in this location, but this would be similar to noise that could be potentially produced by farming activity with the existing farm building platform in place.

The main view from this platform is to the west / north-west and as such this small level of visibility through the hedgerow will make up a very small part of the view.

As such the proposal will have a **very low** degree of landscape effect with a small degree of visibility possible in certain light conditions through the existing hedgerow.

Residents at Neighbouring lot 8 DP 532665, 45 Preservation Lane:

The neighbouring property to the south contains a mature hedgerow running along the boundary to the applicant site, required to be retained under the conditions of the original 8 lot consent (RM161179). An extension of this hedgerow is in place (planted as part of RM161179) which will fill the gap that currently exists near the entrance to the lot. Once established this section of newly formed hedgerow will block views of the proposed RBP from the driveway of lot 8 when leaving site. Until such time as the infill hedgerow grows there will be a view of the proposed RBP when leaving the site at a distance of 100 – 150m.

From the RBP within lot 8 (figure 5 View 3 appended) the proposed RBP will not be visible behind the northern extent of the existing hedgerow located between the sites. On this basis there will be a **very low** landscape effect for these residents, until such time as the additional portion of hedgerow grows to a height of 2m or more when effects will diminish to **negligible.**

Views for Motorists and Cyclists Travelling southward on the Crown Range Road:

The main public viewpoint is from the elevated section of the Crown Range Road where it winds its way down the hill to the north-west of site, when motorists are travelling southward back towards Queenstown and viewing across site.

Users of this road are travelling at varying speeds towards Queenstown in vehicles (or cycling). The Crown Range Road is winding and steep for this part of the journey with the viewers' attention mainly drawn towards the surrounding peaks including the Remarkables and the expanse of the Wakatipu Basin. For the greater part the nearby crest of the slope adjacent to the lower slope of the road screens views towards the site on the flat terrace below, with the focus of view at eye level the mountain ranges beyond.

Figures 3 and 4 are photos taken from the passenger seat of a car travelling down the Crown Range Road. These were the only two locations where I found it possible to get a view towards site. Both were for a brief section of road (roughly 3 seconds) and the view was oblique from eyeline focus. Prior to taking these photos I have not viewed downward to the vicinity of site with my eye drawn towards the more elevated spectacular part of the view to the south towards Frankton flats, the Remarkables and surrounding mountains.

As demonstrated in Figures 3 and 4, where a viewer is looking down and towards site the RBP will not be visible at all from the Crown Range Road owing to the screening hedgerow. The visible parts of site containing open farm paddocks that will be visible are and will continue to be protected as open space under the existing consent notice.

With minimal to no visibility of the proposal from the Crown Range road there will be no change to the existing landscape character. The proposal will have a **negligible** effect on views and visual amenity from the surrounding landscape.

With a small level of visibility from the neighbouring property this will lead to a **very low** effect on their views and visual amenity, with a small level of domestication evident from their driveway (Until such time as the hedgerow grows). Once the hedgerow is established this effect will diminish to **negligible**.

7.0 QLDC District Plan Assessment

The PDP is under appeal and therefore assessment matters from both the ODP and PDP will be covered:

7.1 Operative District Plan – Rural General Zone

The proposal requires a discretionary activity consent for a subdivision in the Rural General Zone. The site is classified as part **Visual Amenity Landscape** and part **Outstanding Natural Landscape** *(Appendix 8A map 2 of the ODP)*.

In terms of landscape classification, the ONL line from map 2 above is plotted on Figure 1 Context Plan in orange colour. My understanding from reviewing prior landscape assessments is that this line was not mapped accurately in this location.

The extent of ODP ONL in the vicinity of site seems arbitrary and not aligned with any relevant landscape topographical or land-use changes. The PDP line (shown in blue on Figure 1) follows the edge of the flatter farm paddocks and the more steeply incised gully feature which seems a more relevant threshold between the visual amenity landscape and the ONL.

Therefore I revert to the more recent and more detailed PDP line which places the extent of the WBRAZ at the edge of the flat paddocks as being aligned with the intent of the ODP ONL line. The part of site that will be located within the ONL is currently protected under consent notice and will not change as part of this proposal.

Based on my assessment above of the accurate location of the ONL (especially as the RBP is located outside of the ONL), this Assessment will cover the relevant Assessment Matters contained within sections **5.4.2.2 (3) Visual Amenity Landscapes** of the ODP.

(a) Effects on natural and pastoral character

The site is located close to the ONL which encompasses the steeper gully portion of site. This area is protected and will remain as such under the proposal. The effects of the proposal will not spread into the ONL or be viewed in context with the nearby ONL and will retain the outstanding natural qualities of the nearby escarpment.

Nearby and in the immediate viewing catchment of the RBP domestication will increase as viewed within the curtilage surrounding the RBP. This will have a localized landscape effect that will be contained within site. In the wider landscape and from public viewpoints the screening effect of the hedgerow will ensure the building and domestic activities are well contained and screened from view. The open paddocks surrounding site will remain as is under the existing consent notice.

The proposal will lead to a **negligible** effect on natural and pastoral character with the building well screened from outside of site and the open paddocks to remain as pastoral landscape.

(b) Visibility of Development

As mentioned above the RBP is well screened from public viewpoints and thus effects will not spread outside of site. It will have a negligible effect on views and visual amenity from public places and will protect the landscape values that ensure views from the Crown Range Road remain unaffected by readily visible human influence.

Proposed property boundaries follow existing and logical boundaries that are already fenced or follow protected covenant areas, therefore no new visible boundaries will be formed in the landscape. The proposal does not constitute sprawl as it places development within an area that already has clustered rural development well screened from view.

(c) Form and Density of Development

The overall site area is large (circa 40Ha) with the proposed lot being 2.63Ha. The remaining area of the smaller lot outside of the curtilage area will have low visibility from the wider landscape and is large enough to be utilized for grazing purposes, to retain a rural character.

The proposal will utilize existing accessways and will only require a short section of newly formed driveway which will be screened from wider viewpoints.

(d) Cumulative effects of development on the landscape

The area in my view is not close to a threshold point whereby further development will degrade landscape values. The mature hedgerows provide a high sense of visual containment in an around the site. Furthermore the wider site is located in an area of the Crown Terrace that is reasonably discrete and away from public focus. The main catchment of views from the Crown Range Road is the surrounding ranges, Remarkables and Wakatipu Basin landscape, and I anticipate that further additional dwellings in this reasonably discrete location (so long as they are not readily visible from the Crown Range Road) could potentially be accommodated.

I note that the landscape report for the original 8 lot consent (RM161179) had no mention of cumulative effects and relied heavily upon the screening effect of the hedgerows. The robustness of the consent conditions was questioned and as a result were solidified to provide more certainty around the retention of open pastoral landscape values.

The peer review report for this consent by Vivian Espie drew attention to a prior Environment Court decision for a nearby land holding:

"Paragraph 53 of the Environment Court Decision states "It is common ground that the level of development already existing in the Crown Terrace visual amenity landscape is close to reaching acceptable limits, and that those limits will be exceeded either by a grant of all this application seeks, or by that and only a little more."

I assume that this decision had development in an area that was potentially more visible such that it may lead to a notable change in character and potential cumulative effects.

Likewise for the more recent consent RM200240 – the landscape report and peer reviewer both agreed that the additional RBP as proposed within that consent (located off Eastburn Road) would not have any adverse cumulative effects.

(e) Rural Amenities

Rural amenities will be retained. The removal of the existing farm building will not result in a reduced potential to operate the farm as I understand the shed is redundant and there are other farm sheds in use around the wider property.

With the existing hedgerow in place the proposal will not reduce the availability of open rural views from any surrounding sites and will retain the open rural amenity that exists in the vicinity.

7.2 Proposed District Plan - Wakatipu Basin Rural Amenity Zone

The proposal will be a Non-Complying Activity as both the proposed lots will be less than 80Ha in size. (note this rule is subject to appeal).

Despite the non-complying activity status of the application, assessment will be made against the **PDP Chapter 27.9.3.3** matters of discretion for subdivisions within the WBRAZ. This is contained with EC consent order (ENV-2019-CHC-072).

The part of site contained within the Rural Zone will remain as existing protected under consent notice.

ASSESSMENT MATTERS	DESCRIPTIVE ASSESSMENT
Subdivision Design and Landscape: *c. The extent to which the location of future buildings, ancillary elements and landscaping responds to the identified elements set out in Schedule 24.8 - Landscape Character Units for the relevant landscape unit, and the following assessment matters:*	
i. the retention of existing vegetation and landform patterns;	The existing hedgerow and ecological protection areas will remain. The hedgerow will screen the RBP from public viewpoints. Landform patterns will not be altered as part of the proposal.
ii. the alignment of lot boundaries in relation to landform and vegetation features and neighbouring development;	The proposed boundaries will follow existing fencelines therefore no new visible boundaries will be formed in the landscape.
iii. earth mounding, and framework planting to integrate buildings and vehicle access;	The existing hedgerows provides structural planting framework for the RBP.
iv. planting of appropriate species that are suited to the general area, including riparian restoration planting;	A list of hedgerow species are listed in the existing consent conditions that have been approved as being appropriate for the area.
vi. the retirement of steep slopes over 15 degrees and restoration planting to promote slope stabilisation and indigenous vegetation enhancement;	The existing ecological protection areas will remain. There are no other steep slopes on site.
vii. the integration of controls for future development that address building height, building colours and materials, building coverage, earthworks, retaining, fencing, gates, vehicle access (including paving materials), external lighting, and domestic infrastructure (including water tanks),	The existing design controls will be adopted with additional points regarding building scale and height.
viii. the integration of existing and provision for new public walkways and cycleways / bridlepaths;	n/a
ix whether the use of varied allotment sizes maintains a sense of spaciousness, or successfully integrates development with existing landform, vegetation or settlement patterns.	Proposed lot 10 is aligned with an existing paddock / fenceline and is in an area that is well screened from surrounding places.
d. The extent to which existing covenants or consent notice conditions need to be retained or are otherwise integrated into the conditions governing the proposed development;	Existing consent notice conditions will be adopted with additional points as noted above.

g. Where the site adjoins an ONF or ONL, the extent to which the development affects the values of that ONF or ONL.	The part of site contained within the ONL will remain as existing protected under the consent notice. Any landscape effects or visible domestication will be confined to the nearby vicinity of the site and will not spread to the surrounding ONL.
h. The extent to which the development adversely affects Escarpment, Ridgeline and River Cliff Features shown on the planning maps, and in particular whether a building platform, access or associated earthworks would be visually prominent on escarpments, river cliff features and ridgelines, as viewed from any public place, including roads.	The Crown Terrace escarpment, visible from the Gibbston Highway is located 6-800m to the south-west of site. The proposal will not be visible at all from any public place.
x. Where building platforms are proposed to be located within the road setback, the extent to which future development (including landscaping and mounding) will maintain views to Outstanding Natural Features and the surrounding Outstanding Natural Landscape mountain context when viewed from the road.	n/a
xx. Where the site size and dimensions are such that compliance with the setback from roads, or the setback from any Escarpment, Ridgeline or River Cliff Feature is not practicable, the extent to which any adverse effects arising from the visibility of future buildings or access is mitigated or remedied, acknowledging the constraints of the site.	n/a
i. Whether mitigation elements such as a landscape management plan or proposed plantings should be subject to bonds or consent notices.	n/a
j. Whether the layout of reserves and accessways provides for adequate public access and use.	n/a
k. Whether the proposed subdivision provides an opportunity to maintain landscape character and visual amenity through the registration of covenants or consent notices requiring open space to be maintained.	The existing consent notice will be retained
Nature Conservation and Cultural values	
aa. Considering the extent to which the subdivision provides for ecological restoration and enhancement. Ecological enhancement may include enhancement of existing vegetation, replanting and weed and pest control.	Existing native vegetation within the ecological protection area will remain.
cc. Assessing the extent to which the subdivision design and layout preserves or enhances areas of archaeological, cultural or spiritual significance.	n/a
ee. Considering the benefits of the removal of identified wilding exotic trees.	No wilding vegetation exists on site, and no new wilding vegetation is allowed to be planted as per the consent notice.

ff Where the subdivision land includes waterbodies, considering the extent to which remediation measures and methodologies can be employed to avoid, remedy or mitigate any adverse effects on human health, water quality, and to the downstream receiving environment.	There are no water bodies or streams evident on site.

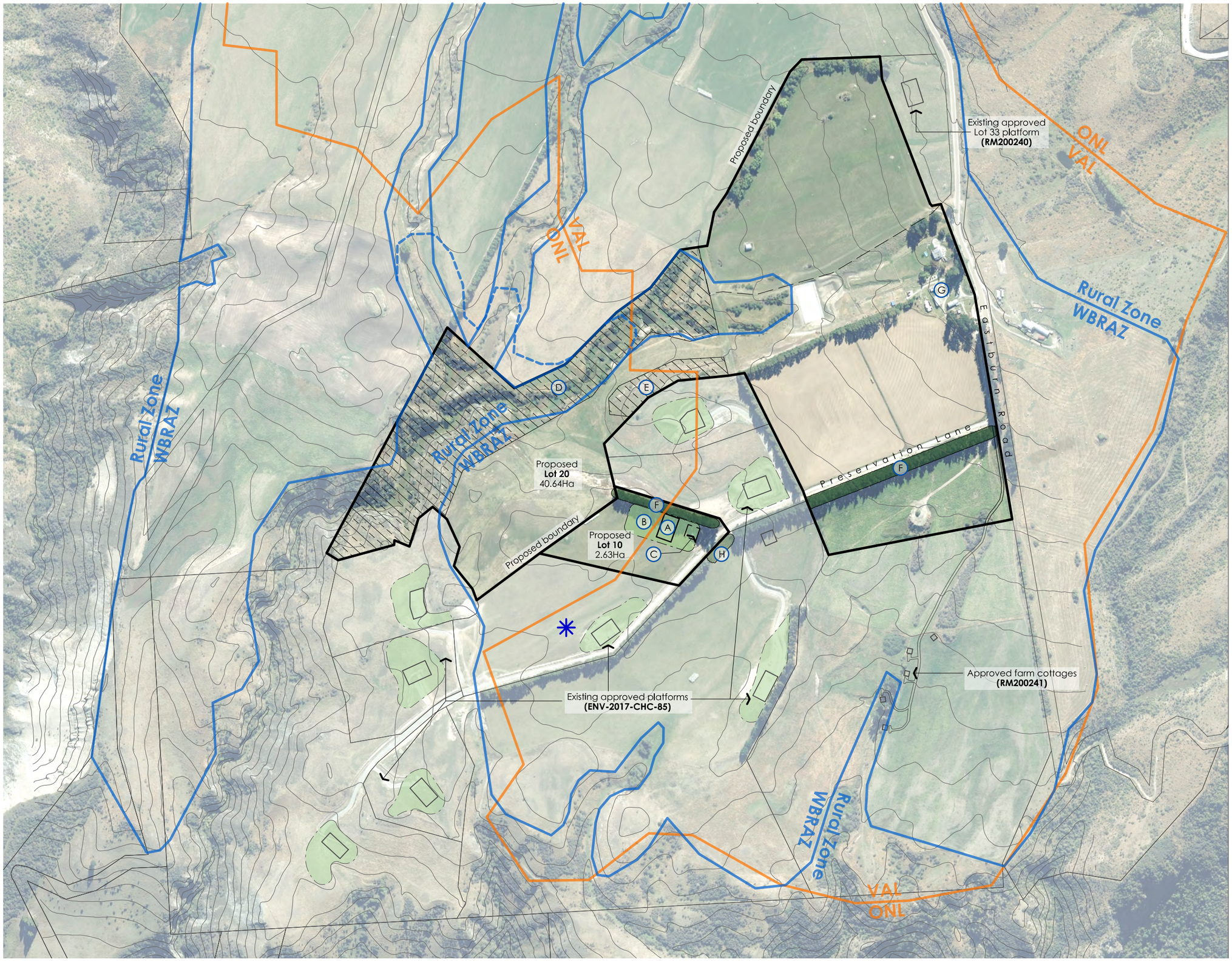
8.0 Conclusion

The proposal seeks to form a two-lot subdivision and place a RBP on the smaller of the two lots in place of the existing FBP. A number of existing consent notice conditions will remain, with the addition of restrictions for building height and coverage within the RBP.

From the Crown Range Road, the site and surrounding area is not overly prominent with views being focused on the wider mountainous landscape. Views towards the site and surrounding Eastburn Road area are intermittent, from a transient viewpoint and for a brief period of time. In addition, the proposed platform is located behind a mature hedgerow which forms a solid buffer to public viewpoints so that a future dwelling and domestic area will be well screened from view.

The RBP will be in an area that already has rural residential use and will not be out of place when perceived at close proximity or from aerial view points (if at all visible). Rural production and pastoral character will remain on the more visually sensitive and open parts of the site.

Guided by both the ODP and PDP the proposal will lead to a **negligible** level of effect on visual amenity and landscape character from surrounding public places and a **very low** effect from nearby private places and will retain the landscape qualities of the site and surrounding Crown Terrace Character Unit.



KEY:

- (A) Proposed 25 x 40m 1,000m2 Residential Building Platform
- (B) Proposed Residential Curtilage Area 5,600m2
- (C) Existing Farm Building Platform retired.
  Existing Farm Shed to be removed prior to construction of a dwelling
- (D) Existing Ecological protection in gully (ENV-2017-CHC-85)
- (E) Existing vegetation enhancement (ENV-2017-CHC-85)
- (F) Existing shelterbelt to be retained (ENV-2017-CHC-85)
- (G) Existing Farm Buildings
- (H) Existing extension of shelterbelt (ENV-2017-CHC-85)

Existing Site:
Lot 20 DP 550017
108 Preservation Lane

10m contours

Properties with Affected Party Approval

QLDC Operative & Proposed District Plan Overlays:

ODP (Operative District Plan) Landscape Classification Map: VAL / ONL Line

PDP (Proposed District Plan): Rural Zone (Stage 1) / Wakatipu Basin Rural Amenity Zone (Stage 2)

PDP ONL Line

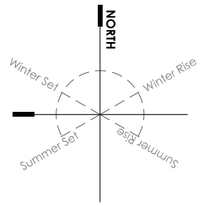
SITE LANDSCAPE ARCHITECTS ^

Figure 1: **Context Plan**

2 Lot Subdivision: Eastburn Road, Crown Terrace

RC 13.12.21 1:6,000 @ A3

SITE Landscape Architects . www.sitela.co.nz . 310_SK-001_Landscape Plan



KEY:

- (A) Proposed 25 x 40m 1,000m2 Residential Building Platform
- (B) Proposed Residential Curtilage Area 5,600m2
- (C) Existing Farm Building Platform retired.
  Existing Farm Shed to be removed prior to construction of a dwelling
- (D) Existing Ecological protection in gully (ENV-2017-CHC-85)
- (E) Existing vegetation enhancement (ENV-2017-CHC-85)
- (F) Existing shelterbelt to be retained (ENV-2017-CHC-85)
- (G) Existing Farm Buildings
- (H) Existing extension of shelterbelt (ENV-2017-CHC-85)

Existing Site:
Lot 20 DP 550017
108 Preservation Lane

10m contours

Properties with Affected Party Approval

Proposed Building platform
behind hedgerow

Photo Notes:

Camera: Samsung Galaxy 8;
Date Photo Taken: 17.09.21
Full photo frame shown - image appears smaller than real life as displayed on A3 page

Proposed Building platform behind hedgerow

Photo Notes:

Camera: Samsung Galaxy 8;
Date Photo Taken: 17.09.21
Full photo frame shown - image appears smaller than real life as displayed on A3 page

Proposed Building platform
not visible behind hedgerow

Small portion of existing farm
shed visible behind hedgerow

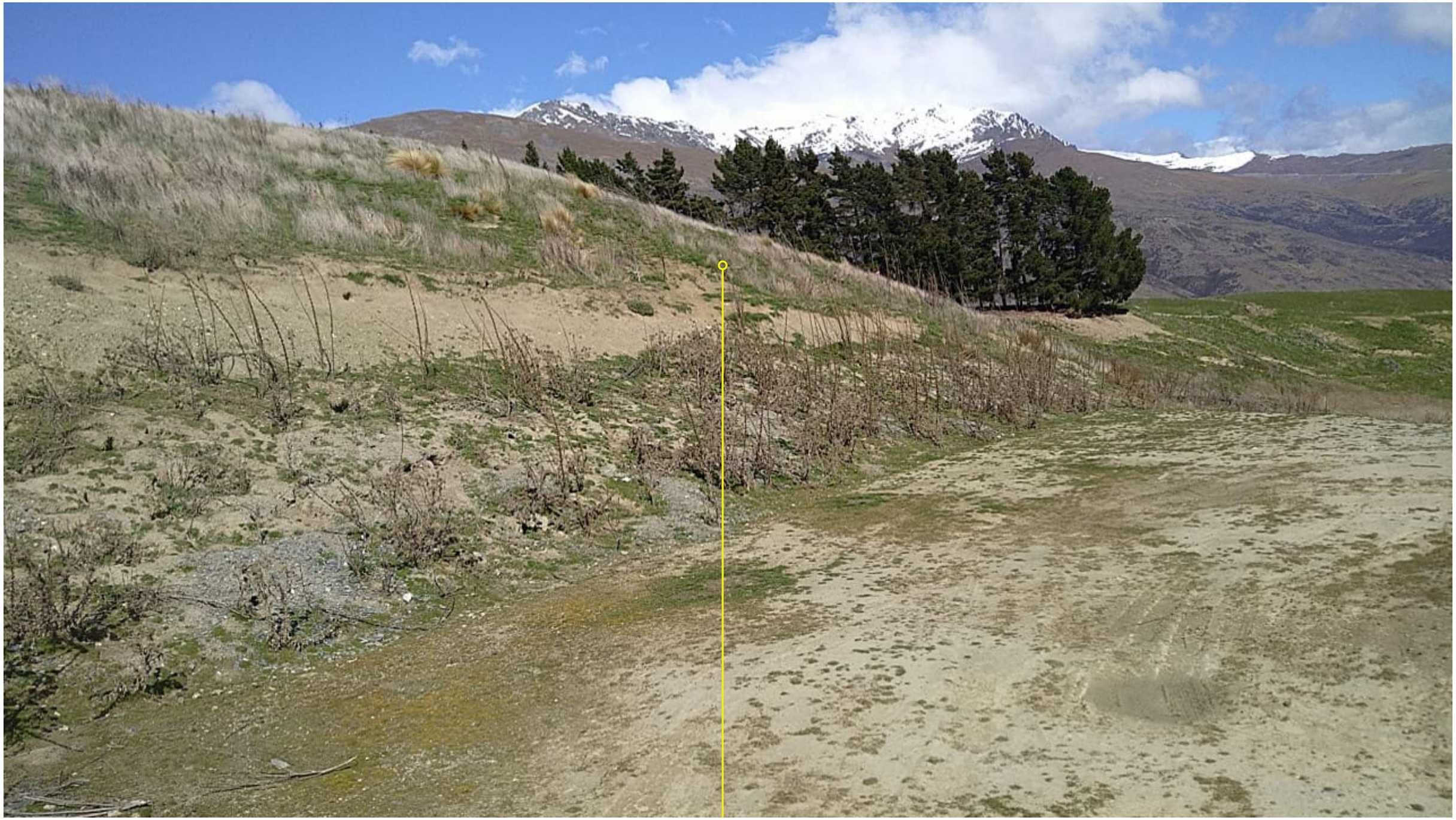
Photo Notes:

Camera: Samsung Galaxy 8;
Date Photo Taken: 17.09.21
Full photo frame shown - image appears smaller than real life as displayed on A3 page

Proposed Platform
behind hedgerow

Photo Notes:

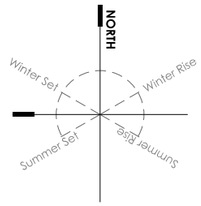
Camera: ? Unknown, taken by applicant;
Date Photo Taken: 25.09.21
Full photo frame shown - image appears smaller than real life as displayed on A3 page



Proposed Platform
behind topography and
hedgerow

Photo Notes:

Camera: ? Unknown, taken by applicant;
Date Photo Taken: 25.09.21
Full photo frame shown - image appears smaller
than real life as displayed on A3 page



KEY:

- (A) Proposed 25 x 40m 1,000m2 Residential Building Platform
- (B) Proposed Residential Curtilage Area 5,600m2
- (C) Existing Farm Building Platform retired.
  Existing Farm Shed to be removed prior to construction of a dwelling
- (D) Existing Ecological protection in gully (ENV-2017-CHC-85)
- (E) Existing vegetation enhancement (ENV-2017-CHC-85)
- (F) Existing shelterbelt to be retained (ENV-2017-CHC-85)
- (G) Existing Farm Buildings
- (H) Existing extension of shelterbelt (ENV-2017-CHC-85)

Existing Site:
Lot 20 DP 550017
108 Preservation Lane

10m contours

Properties with Affected Party Approval

Issue 3
November 10, 2021

M & S Lawn – Eastburn Road Subdivision

Infrastructure Feasibility Report

Prepared by: Civilised Ltd

Civilised Ltd

PO Box 1461
Queenstown
Ph 027 223 3036

M & S Lawn – Eastburn Road Subdivision

Infrastructure Feasibility Report

Report prepared For: M & S Lawn

Report Prepared By: John McCartney
john@civilised.nz

Report Reference: QS055
2021-11-10 Infrastructure Report.docx

Date: 10th November 2021

Issue	Details	Date
1	Draft for comment	30th June 2021
2	Updated following review	6th September 2021
3	Updated following revision to the subdivision drawing	10th November 2021

Executive Summary

Martin and Suzanne Lawn propose to create a two-lot subdivision on their land at Eastburn Road near Queenstown. Civilised Ltd have assessed the necessary development infrastructure in relation to:

- Access
- Water supply
- Wastewater disposal
- Stormwater runoff
- Power Supply
- Telecommunications

We confirm that it is feasible to provide the necessary development infrastructure to service the proposed subdivision.

Access to the new allotment (Lot 10) will be provided via an existing private right of way (Preservation Lane) running from Eastburn Road to the southeast of the site.

It is proposed to connect the new allotment to the existing potable water supply bore on site. Proposed Lot 20 has an existing water supply bore and this will be reticulated to Lot 10. Firefighting water will be provided by a suitable firefighting reserve maintained in a tank near a future dwelling constructed on the site.

Wastewater is able to be treated and soaked to ground on site by way of individual on site wastewater disposal systems. The suitability of the ground for receiving the wastewater flows has been confirmed following test pitting carried out on site.

Stormwater runoff from impervious areas constructed on the site will also be soaked to ground by use of roadside swales and specifically constructed soakage galleries.

The service providers for power supply and telecommunications have confirmed that they are able to provide a suitable connection to the proposed subdivision. The lot has existing points of connection for power and telecommunications at the southeast corner.

Table of Contents

1 Introduction

Martin and Suzanne Lawn have engaged Civilised Limited to investigate and report on the feasibility of providing utility services and the necessary development infrastructure for their proposed subdivision development on land on Eastburn Road near Queenstown.

This report considers the nature of the proposed development, the site conditions affecting the implementation of the necessary development infrastructure and describes the proposed implementation of the following elements;

- Access
- Water supply and internal reticulation
- Wastewater collection and disposal
- Stormwater control
- Telecommunications
- Power supply

The report is to supplement and support the planning submissions made by Southern Planning Group Ltd on behalf of the Martin and Suzanne Lawn with regard to the application for consent to subdivide.

2 Description of Proposal

Martin and Suzanne Lawn propose to subdivide their property at Eastburn Road on the Crown Terrace near Queenstown. The land is currently zoned Rural General Zone under the Operative District Plan and split zoned under the Proposed District Plan (Rural Zone and Wakatipu Basin Rural Amenity Zone). A total of 2 rural allotments are proposed, one with a new dedicated Building Platform and the second balance lot has the existing house. The allotments range in size as follows:

- Lot 20 – 40.64 ha – contains the existing house and a number of accessory buildings
- Lot 10 – 2.63 ha – contains a new residential building platform that is 1000m² in area.

The new building platform on Lot 10 is to be created on relatively flat ground within the new allotment. The proposed new lot is intended for rural lifestyle development. A scheme plan showing the indicative layout of the proposed subdivision is contained in Appendix A.

It is intended to provide and construct a new access crossing onto the new allotment at the time of subdivision from Preservation Lane. The access to the building platform will be constructed at the time a dwelling is erected on the site. This new access crossing for the lot will be from the existing right of way on the southeast side of the proposed Lot 10 as shown on the Aurum Survey Consultants Ltd drawing included in Appendix A.

We note that this assessment of the necessary development infrastructure is limited to consideration of the scale of the subdivision as it is currently proposed.

3 Site Description

The proposed development is located on terrain to the west of Eastburn Road. The site has frontage to Eastburn Road.

The site consists of large paddocks currently used for stock grazing. There is an existing curtilage area and associated landscaping around the existing dwelling (on proposed Lot 20).

Grades in the vicinity of the building platform on Lot 10 can be described as flat to gently sloping.

The subject site of the development is contained within the following Certificate of Title:

- 991857 (Lot 20 DP 561087) – 43.2714 ha

The elevation of the proposed lot is approximately RL 600m Mean Sea Level (MSL).

Generally, the land within the proposed new allotment area may be described as pasture and includes some trees and brush.

During our site visits no evidence of large-scale land instability was identified within the boundaries of the proposed rural development.

The land receives approximately 900mm of rainfall per annum and may be subject to drought conditions during the summer months.

4 Access

4.1 Proposed Accesses

The proposed subdivision has direct frontage with Eastburn Road and will also utilise the existing access from the right of way (Preservation Lane) that runs from Eastburn Road and passes the southeast side of proposed lot 10.

The existing access arrangements for lot 20 will remain unchanged.

The ROW that runs on the southeast side of proposed lot 10 was constructed for the subdivision approved by QLDC under RM161179 and has been named Preservation Lane. This private lane from Eastburn Road to the proposed Lot 10 boundary, has a legal width of 15 metres and a formed width of between 5.5m and 6m. It consists of an unsealed surface and currently services 10 allotments. The lane meets the criteria for a road of an E2 classification in accordance with the QLDC Land

Development Code of Practice (QLDC COP). This class of road can service up to 20 dwelling units and is of a suitable standard to service the one additional allotment and future dwelling that will be created by the proposed subdivision.

It has been assumed that the access to the lot from Preservation Lane will be in the same location as the current informal crossing point. The actual sight distances from the proposed access to the lane have been surveyed. The required and available sight distance for the new residential access is as follows:

Table 1 – Sight Distances

Location	Usage	Speed Limit	Required Sight Distance	Actual Sight Distance available
Lot 10	Residential	100 km/hr	170 metres (Residential activity)	~ 170m to the northeast > 170m to the southwest

The required sight distances have been taken from 29.5.18 of the QLDC Proposed District Plan.

It is noted that the location of the proposed access is currently utilised as a farm access, and this will also continue.

As demonstrated above, the required sight distance is achieved for the proposed access to the lane.

In accordance with the requirements of QLDC, the access will need to conform to the requirements of the Proposed District Plan. Specifically, the access will need to meet the requirements of Diagram 8, Chapter 29 of the Proposed District Plan. A copy of this diagram is included in Appendix B.

As the access road intersects with an unsealed private road it will not be sealed.

4.2 Proposed Roading

As mentioned above, the proposed new roading to the building platform (on Lot 10) will not be constructed at the time of subdivision as it is expected that the future lot owner will want to consider their preferred site layout and proposed dwelling layout when designing a new driveway to the building platform. The future driveway will need to be constructed in accordance with the QLDC COP.

The access dimensions have been based on the minimum requirements outlined in Table 3.2 QLDC COP. The proposed roads have a movement lane width of 3.0m. The reasons for this width are as follows:

- The roads correspond to an E1 road in table 3.2 of QLDC COP. This is classed as a lane.
- This features a movement lane of 2.5m width, 0.5 total sealed shoulder width with a water table drain.
- Pedestrians are catered for by the shoulder and berm.

- Cyclists are catered for by sharing the movement lane.

These requirements may be included in the consent as consent notice conditions that are registered against the title of Lot 10 and require the driveway to be constructed to this standard when it is designed and constructed at a later date.

5 Water Supply

5.1 Existing Systems

The overall site currently has access to a water supply from a bore within the site. This source of water is the anticipated water supply for the new building platform on proposed Lot 10. No changes are proposed to this water source for proposed Lot 20.

5.2 Water Demand Assessment

This water demand assessment is for the one new allotment with building platform (proposed Lot 10).

The existing water supply for the existing house on proposed Lot 20 will remain unchanged.

Peak water demand would be expected during the summer holiday period when household irrigation requirements are high and seasonal populations are at their peak.

The Queenstown Lakes District Council Land Development & Subdivision Code of Practice (QLDC LDSCP) applies to the proposed subdivision and requires 700 l/person/day or 2,100 l/day per lot (assuming an average occupancy of 3 people/lot).

While not explicitly stated it is assumed that the 2,100 l/day/lot provides for the minimum 1,000 l/day of potable demand required under section 15.2.11.3 (iii) of the QLDC District Plan and an additional 1,100 l/day for irrigation and general use (car washing etc).

The assumed demand of 1,100 l/day for irrigation and general use is appropriate given the location and the likely landscaping.

Allowing for some irrigation requirements and the potable demand, the following design figures have been adopted:

- Peak water consumption for proposed Lot 10 = 2,100 litres/day/lot
- Irrigation Allowance for proposed Lot 10 = 1,100 litres/day/lot
- Potable Water Allowance for proposed Lot 10 = 1,000 litres/day/lot

5.3 Water Bore

The water source for proposed Lot 10 will be from the Otago Regional Council well number CC12/0101. This bore was constructed in May 2019 by Southdrill. The bore was constructed to a depth of 77.58 metres and the static water level was 64.2 metres below ground level. It was test pumped at a rate of approximately 1.5 litres per second for a period of 150 minutes and the drawdown over this period was 4.64 metres.

A copy of the bore record information from the Southdrill is attached in Appendix C.

The bore currently supplies one dwelling (within proposed Lot 20) and up to a further five farm stay cabins on Lot 19 DP20799. The water requirement for the farm stay cabins is 2,100 litres per day for a total farm stay water requirement of 10,500 litres per day.

Table 2 – Water Demand

Location	No.	Usage	Total
Existing house on Lot 20	1	2,100 l/day	2,100 l/day
Approved farm stay operation	5	2,100 l/day	10,500 l/day
Proposed future dwelling on Lot 10	1	2,100 l/day	2,100 l/day
		Total	14,700 l/day

The total water demand from the bore is expected to be 14,700 litres per day including the proposed building platform. Under the Otago Regional Council permitted activity rules can take up to 25,000 litres per day. The bore has sufficient capacity to reticulate potable water to the additional allotment.

In 2019 at the time of bore construction, the water from the bore was sampled and tested by Citilab in Dunedin. They concluded that the water was suitable for drinking purposes although they noted that the water was hard. A copy of the Citilab water quality test results are included with this report in Appendix C.

During June 2021, a further water quality test was undertaken. The water from the bore was sampled and tested by Hills Laboratories in Christchurch. These results show that the water meets the Drinking-water Standards for New Zealand 2005 (Revised 2018). A copy of the Hills Laboratories water quality test results is included with this report in Appendix C.

5.4 Reticulation Concept

The potable water supply for proposed Lot 10 will be reticulated directly from the water storage tanks adjacent to the bore on Lot 20 to the allotment. This will involve the installation of piped reticulation from the tanks to the building platform on the proposed allotment. The bore will

continue to serve the existing dwelling on proposed Lot 20 in a relatively unchanged arrangement from that existing currently.

The reticulation will be extended to the new building platform on proposed Lot 10. This will be a trickle supply that requires a water tank to provide storage adjacent to the future new dwelling.

The individual allotment will be required to install their own storage tanks with proprietary pressure boosting as appropriate.

At the time of subdivision: proposed Lot 20 will retain the existing water supply that services the existing house proposed Lot 10 will receive water from a dedicated lot connection to the existing water bore on Lot 20.

5.5 Fire Fighting Water

The recent decisions associated with the Proposed District Plan require under Rule 21.7.5 that each new building must make the following provisions for firefighting:

- A water supply of 45,000 litres and any necessary couplings.
- A hardstand area adjacent to the firefighting water supply capable of supporting fire service vehicles.
- Firefighting water connection point within 6m of the hardstand, and 90m of the dwelling.
- Access from the property boundary to the firefighting water connection capable of accommodating and supporting fire service vehicles.

At the time that a dwelling is established on the building platform on Lot 10, it is proposed that new tanks near the proposed dwelling will need to be constructed to serve as a firefighting reserve. These tanks should be a minimum of 2 x 30,000 litres of which 45,000 litres is to be maintained at all times as a static firefighting reserve. In addition, vehicular access to the tank is to be maintained at all times and a hardstand area constructed adjacent to the tank to allow a fire appliance to park and pump from the tank. The ongoing requirements for the firefighting water supply should be addressed as conditions of consent.

5.6 Recommendations

The water supply for the development will be provided for by way of: Lot 20 continuing to use the existing water supply; connecting the new building platform on proposed Lot 10 to the existing potable water supply within Lot 20.

The following consent notice should be registered on the title of the new residential allotment:

1. *At the time a dwelling is erected on the lot, domestic water and fire fighting storage is to be provided. A minimum of 45,000 litres shall be maintained at all times as a static fire fighting reserve within a minimum of 2 x 30,000 litre tanks. Alternatively, a 7,000 litre fire fighting*

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

The Fire Service connection point/coupling must be located so that it is not compromised in the event of a fire.

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

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

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

Firefighting water supply may be provided by means other than the above if the written approval of the New Zealand Fire Service Central North Otago Area Manager is obtained for the proposed method.

6 Wastewater Disposal

6.1 General

No community or Council scheme is available for connection in close proximity to the subject site. It is not sustainable to remove waste from site therefore individual on site wastewater disposal (OSWWD) must be examined.

The existing dwelling on Lot 20 has an existing wastewater treatment and disposal system. No change to this system is proposed.

It can be shown that the development of Lot 10 may be advanced on the basis of a new on-site wastewater disposal system within the lot. The feasibility of such a system is discussed below.

6.2 Site and Soil Assessment

A site and soil assessment has been undertaken and the report for this is included in Appendix D of this report. This assessment has been based on the guidelines of AS/NZS 1547:2012. The site and soil assessment was carried out by undertaking a site visit with a detailed walkover inspection along with a review of the logs for the excavation of test pits within site by Geosolve Ltd. A copy of the test pit logs, and location drawing is included elsewhere with the resource consent application.

6.3 Conclusions

Based on our investigations to date the soils on the site have sufficient capacity to facilitate the disposal of effluent to land via sub-soil soakage methods, however the presence of sensitive receivers (being groundwater and surface water bodies) requires that the effluent receive some form of treatment prior to discharge.

We confirm that based on our assessment of the likely loadings, on-site wastewater treatment and disposal systems may be designed to provide the necessary level of treatment such that the risk of causing significant adverse environmental effects is minimised.

For this particular development, given the size of the lots to be created and the large amount of land area available, it is expected that the on-site sewage and disposal systems could be for either individual sewage management or communal management.

We confirm that a tank system, in conjunction with primary and secondary treatment elements, may be designed, implemented and maintained to ensure a “means of treating and disposing of sewage which is consistent with maintaining public health and avoids or mitigates adverse effects on the environment”, therefore satisfying council policy.

6.4 Recommendations

Given the size of the proposed rural lot we believe it is appropriate and feasible to consider an individual lot system for this development.

An individual lot system that would provide sufficient renovation to effluent from on-site wastewater disposal for this development prior to discharge to land are summarised as follows.

6.4.1 Individual Lot Systems

The individual lot system would comprise a multi chamber septic tank or similar filtered type tank to each lot combined with a secondary treatment element. Sewage from the treatment system would be pump or siphon dosed at a controlled daily rate to a disposal field of shallow depth. This system could be designed to provide sufficient treatment/renovation of effluent prior to discharge to land. Provision should be made at site planning stage for a minimum disposal field area of 50 m² and a reserve field area of 50 m².

To maintain high effluent quality such systems would require the following;

- Specific design by a suitably qualified professional engineer.
- A requirement that each lot must include systems that achieve the levels of treatment determined by the specific design.
- Regular maintenance in accordance with the recommendations of the system designer and a commitment by the owner of each system to undertake this maintenance.
- Intermittent effluent quality checks to ensure compliance with the system designers specification.
- Siting of disposal fields greater than 50m from any surface watercourse or water bore.

7 Stormwater Disposal

The intended access arrangements and the development of dwellings and associated buildings on the proposed building platform on the site will alter the existing stormwater run-off patterns from the site catchment.

The proposed stormwater infrastructure on the site will comprise two primary elements as follows:

1) Roadside drainage swales to receive and dispose of the runoff from the proposed future driveway to the building platforms on Lot 10.

2) Future soak pits to be constructed to drain runoff from buildings developed on the site.

Driveway swales will be used to convey stormwater flows either to the lower parts of the site and to provide soakage to allow runoff to drain to ground. Subject to detailed design, roadside drainage swales may include specifically constructed soak pits.

The future dwelling and any associated buildings will primarily reticulate roof runoff to water supply tanks. However, there will be various impermeable parts of the site that will need to direct runoff to specifically constructed soakage galleries to dispose of runoff. These areas will include paved areas and overflow provisions from water tanks to allow for rainwater runoff from rooves when the water storage tanks are full.

Subject to specific design in conjunction with the dwelling or associated building designs, the drainage of impermeable paved areas will be able to be drained to ground by the use of an appropriately design stormwater soak pit. Test pits that were excavated on site as part of the site and soil assessment for wastewater disposal confirm that ground conditions are suitable for stormwater disposal by soakage to ground.

8 Power Supply & Telecommunications

Photo 1 – Existing services

8.1 Power Reticulation

Aurora Energy Limited has been contacted regarding the proposed subdivision development. They have provided a letter confirming their ability to make an electricity supply available for this development. A copy of correspondence to and from Aurora is included in Appendix F.

A power supply connection has already been established for proposed Lot 10 with a connection point in the southeast corner of the lot. This was constructed at the time of the neighbouring subdivision (refer to photo 1 above).

8.2 Telecommunications Reticulation

Chorus have been contacted regarding the proposed subdivision development. They have provided a letter confirming their ability to make an electricity supply available for this development. A copy of correspondence from Chorus is included in Appendix G.

A telecommunications connection has already been established for proposed Lot 10 with a connection point in the southeast corner of the lot. This was constructed at the time of the neighbouring subdivision (refer to photo 1 above).

9 Limitations

This report has been written for the particular brief to Civilised Ltd from their client and no responsibility is accepted for the use of the report for any other purpose, or in any other context or by any third party without prior review and agreement.

In addition, this report contains information and recommendations based on information obtained from a variety of methods and sources including inspection, sampling or testing at specific times and locations with limited site coverage and by third parties as outlined in this report. This report does not purport to completely describe all site characteristics and properties and it must be appreciated that the actual conditions encountered throughout the site may vary, particularly where ground conditions and continuity have been inferred between test locations. If conditions at the site are subsequently found to differ significantly from those described and/or anticipated in this report, Civilised Ltd must be notified to advise and provide further interpretation.

Appendix A

Proposed Subdivision Drawing

N

Lot 33 DP 561087
(refer RM200240)

Lot 20 DP 561087

Lot 27
DP 417527

Eastburn Road
(Legal Road)

Vegetation Enhancement Area

BA

Existing Consent Notice 11949595.4
Area (BA) 0.67ha

Lot 20
40.64Ha

Existing Consent Notice 11949595.4
Area (BB)
Ecological Gully Area
8.05ha

Lot 6
DP 532665

Existing ROW & Services

A

BB

XX

Lot 20 DP 561087

Lot 20 DP 561087

Lot 7
DP 532665

B

Existing ROW & Services Easements (A, B, C, L)

Existing Consent Notice 11949595.4
Area (AJ)
Farm Building Platform
400m²

Existing Consent Notice 11949595.4
Area (XX)
Open Space Area
5.94ha

BC

BP

AJ

Existing ROW & Services

L

Lot 10
2.63Ha

XX

C

Existing ROW
& Service Area (C)
for existing Lots 1 to 5

Lot 4
DP 532665

Lot 5
DP 550017

Lot 8
DP 532665

Lot 19
DP 532665

Lot 1
DP 532665

Note:

- Easements may be needed for services
- Final areas and dimensions are subject to survey and final LINZ approval.
- Existing easements and consent notices will be brought forward from the parent title as they relate to each new parcel.

Lots 10 and 20 being a subdivision of
Lot 20 DP 561087
Preservation Lane, Crown Terrace

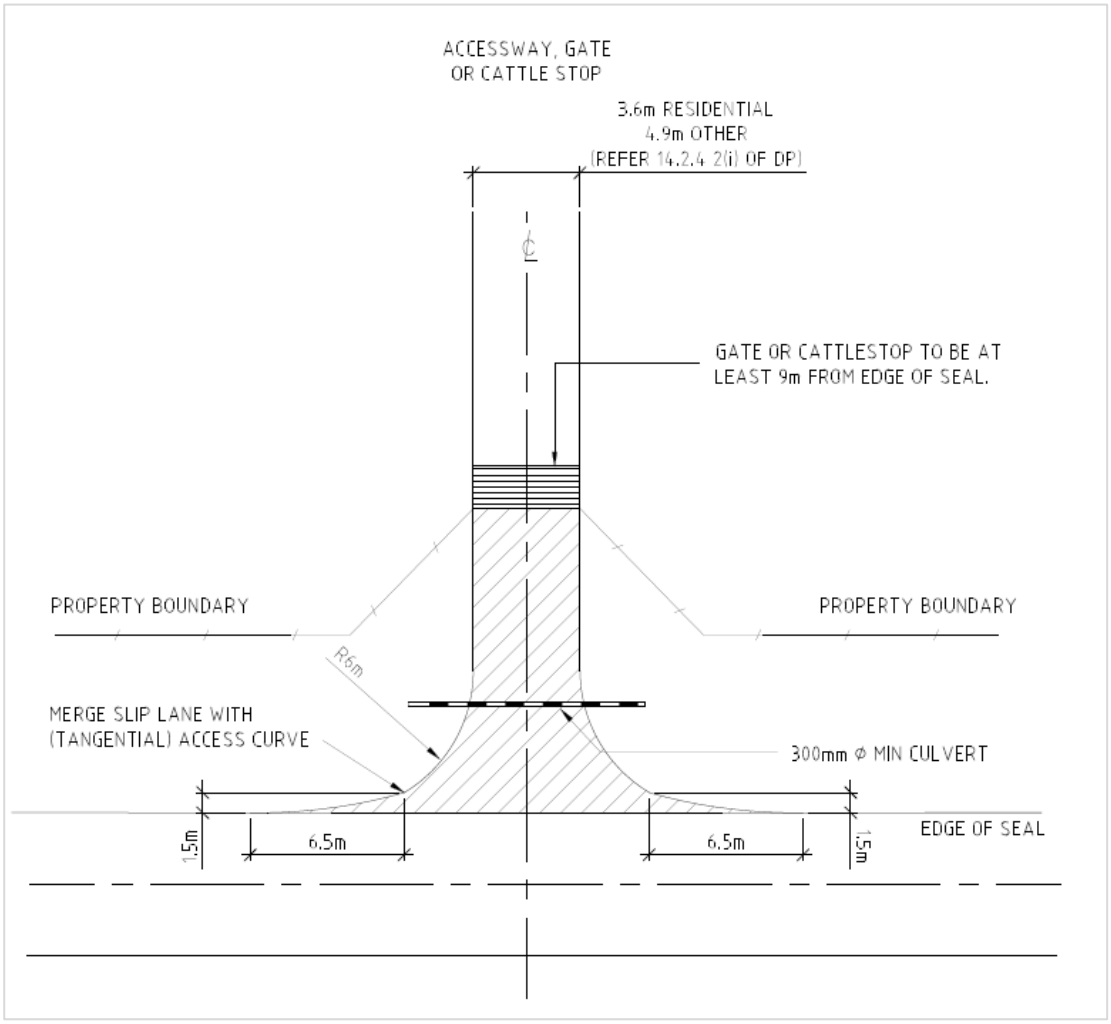
DATE: 26 Oct 2021	Scale 1:4000 Original Plan A3	DRAWING & ISSUE No. 3720-11R-1C
BY: B McLeod		

AURUM SURVEY
PO Box 2493
Wakatipu 9349
Ph 03 442 3466
Fax 03 442 3469
Email admin@ascl.co.nz

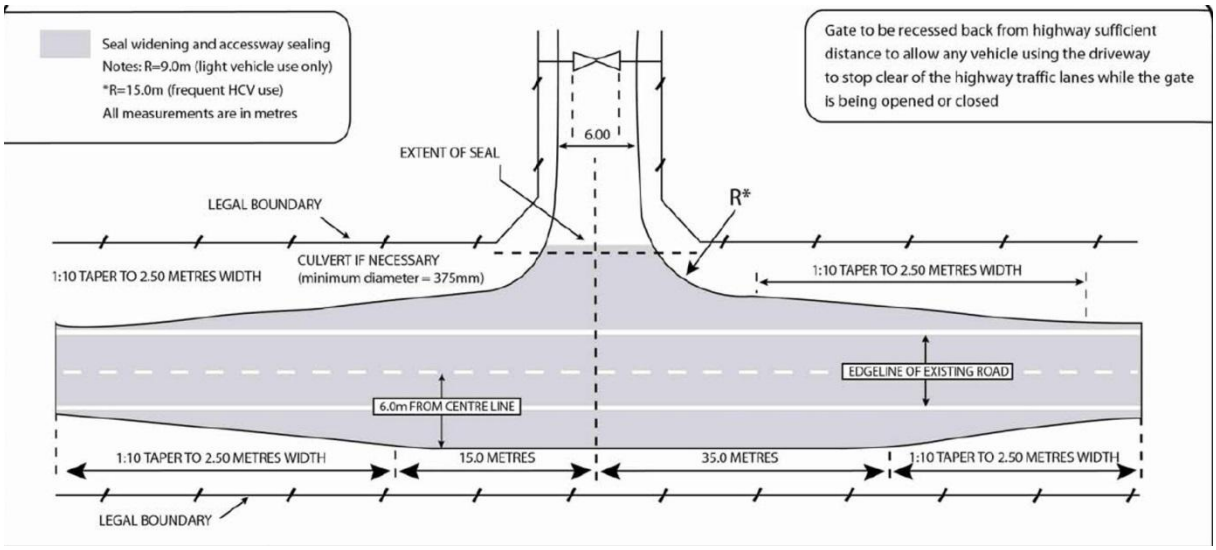
Appendix B

Access Diagrams

29.14.8 Diagram 8 - Access Design



29.14.9 Diagram 9 - Access Design



Appendix C

Water Supply Information

SOUTHDRILL
WATER EXPLORATION

BORE LOG DATA SHEET

CLIENTS NAMES:	MARTIN LAWN
FULL ADDRESS:	108 EASTBURN ROAD CROWN RANGE
RESOURCE CONSENT NO:	RM19.057
BORE SIZE:	150MM
START DATE:	24 May 2019
FINISH DATE:	28 May 2019
MACHINE:	DR24
RAPID NO:	108
GRID REFERENCE:	E1277163 N5009317
DRILLER:	R HARREX
MEASURED FROM:	Top of casing
300mm UPSTAND:	Yes
TOTAL DEPTH BORE:	77.88M
TOP LEADER:	75.80M
STATIC WATER LEVEL:	64.50M
SCREEN - SLOT:	.025MM
TYPE	Stainless
PVC SLOTTED:	n/a
SCREEN:	1.5M
LEADER:	0.50CM
SUMP:	0.12CM
TOTAL CASING USED:	76.15M
AT TIME OF PUMPING-BORE DID:	1.5LTS /SEC
PUMPING WATER LEVEL:	71.16M SLOWLY RISEING
TEST PUMP PERIOD:	2.5HRS
AIR/PUMP INTAKE:	DEVOLOPEING WITH AIR
BACTERIAL WATER TEST:	CITI LAB TEST
CHEMICAL WATER TEST:	CITI LAB TEST
IMPERVIOUS SEAL AT GROUND LEVEL AROUND CASING	Yes
CASING TOP SEALED TO PREVENT CONTAMINATION	Yes

COMMENTS:

BORE LOG:

0.0-0.60CM	TOP SOIL		
0.60-35.1M	SILTY COARSE GRAVELS ODD		
	COBBLES		
35.1-78.88M	SILTY COARSE GRAVELS ODD		
	BOULDER		
	POSSIBLE LAND SLIDE		

P:\Contracting\SouthDrill\1 SouthDrill 2018 - 2019\SD Jobs 2018 - 2019\a Central Jobs\Job 3108 - Concept Builders LTD\Bore Log MARTIN LAWN 108 EASTBURN RD

Citilab
Analysts Consultants

SouthDrill Limited

PO Box 968
Invercargill 9840

ATTENTION: Graeme Stewart

LABORATORY ANALYSIS REPORT

#75110

Tuesday, 11 June 2019

Your Order #:- 4117 .

Job Start: 29/05/19 16:29:39

LAB. REF.	Sample Taken:	Sample Description / Test start:	Test complete:	ANALYSIS	RESULT	comments: Analytical Method	Detection Limits
39119	28/05/19 15:00	(Citilab to include explanatory notes with report). Copy of report and comments (for any McNeill job) to admin@mcneill.com and alison.mcbain@mcneill.com Martin Lawn ~ Bore Water					
		30/05/19 15:50:39	31/05/19 16:12:11	Acidity Requires CO2	7 g/m³ as CaCO3	APHA 2310, B	5 g/m³ as CaCO3
		30/05/19 11:35:21	31/05/19 16:29:28	Alkalinity to pH 4.5	180 g/m³ as CaCO3	APHA 2320, B	1 g/m³ as CaCO3
		30/05/19 11:35:22	31/05/19 16:29:30	Alkalinity to pH 8.3	<1 g/m³ as CaCO3	APHA 2320, B	1 g/m³ as CaCO3
		31/05/19 15:06:57	5/06/19 10:00:37	Bromide (IC)	<0.1 g/m³	APHA4110, B	0.03 g/m³
		31/05/19 15:06:47	5/06/19 10:01:02	Chloride (IC)	1.7 g/m³	APHA4110, B	0.05 g/m³
		30/05/19 15:50:40	31/05/19 16:12:38	Colour (Hazen) *	10 (<2.5 Hazen filtered)	Lovibond Comparator	2.5° Hazen
		30/05/19 11:35:25	31/05/19 16:10:38	Conductivity @ 25°C	36 mS/m	APHA 2510, B	0.03 mS/m
		31/05/19 15:06:55	5/06/19 10:00:42	Fluoride (IC)	<0.1 g/m³	APHA4110, B	0.03 g/m³
		5/06/19 10:38:38	10/06/19 13:12:36	Total Hardness By Calculation	185 g/m³ as CaCO3	APHA 2340, C	1 g/m³ as CaCO3
		30/05/19 11:35:24	31/05/19 16:02:06	pH	7.79 @ 20°C	APHA 4500 - H+, B	0.02 pH unit
		31/05/19 15:06:55	5/06/19 10:00:38	Phosphate (IC) *	<0.2 g/m³	APHA4110, B	0.4 g/m³
		31/05/19 15:07:51	5/06/19 10:01:09	Phosphate-P (IC) *	<0.1 g/m³	APHA4110, B	0.2 g/m³
		31/05/19 15:06:48	5/06/19 10:00:23	Sulphate (IC)	3.9 g/m³	APHA4110, B	0.03 g/m³
		31/05/19 13:34:19	31/05/19 16:03:22	Turbidity - class 1	4.1 NTU	APHA 2130, B	0.05 NTU
>> Referral: Analytica Laboratories		29/05/19 16:41:14	10/06/19 13:11:25	Arsenic-Total *	<0.0005 g/m³	APHA 3125, B	
>> Referral: Analytica Laboratories		29/05/19 16:41:30	10/06/19 13:11:29	Calcium-Total (ICP) *	64.2 g/m³	APHA 3125, B	
>> Referral: Analytica Laboratories		29/05/19 16:41:43	10/06/19 13:11:39	Iron-Total (ICP) *	0.37 g/m³	APHA 3125, B	
>> Referral: Analytica Laboratories		29/05/19 16:41:23	10/06/19 13:11:34	Magnesium-Total (ICP) *	5.96 g/m³	APHA 3125, B	
>> Referral: Analytica Laboratories		29/05/19 16:41:39	10/06/19 13:11:45	Manganese-Total (ICP) *	0.0080 g/m³	APHA 3125, B	
		31/05/19 15:06:52	5/06/19 10:00:17	Nitrate (IC)	2.7 g/m³	APHA4110, B	0.03 g/m³
		31/05/19 15:07:53	31/05/19 15:07:59	Nitrate-N (IC)	0.61 g/m³	APHA4110, B	0.01 g/m³
		29/05/19 16:41:08	4/06/19 10:40:16	E. coli (Quanti-Tray)	<1.0 MPN/100 mL	APHA 9223 B	1.0 MPN/100 mL

(Block C, Invermay Agricultural Centre, Puddle Alley, Mosgiel 9092) P.O. Box 781, Dunedin 9054
Telephone (03) 484 7588
Email: info@citilab.co.nz
Website: www.citilab.co.nz

Citilab
Analysis Consultants

Analyst's Comments:
These samples were collected by yourselves and analysed as received at the laboratory.
The detection limits given are those attainable in a relatively clean matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis.

Units: In accordance with modern practice the previous 'mg/L' is now expressed as the equivalent 'g/m^3'.

IANZ
ACCREDITED LABORATORY
Citilab is accredited by International Accreditation New Zealand (IANZ). The tests reported here have been performed in accordance with its terms of accreditation - with exception of any marked *, which are not within Citilab's scope.

Debra Fairley-Aldridge
Quality Manager

Naomi Pelet
Microbiology Technician (KTP)

(Block C, Invermay Agricultural Centre, Puddle Alley, Mosgiel 9092) P.O. Box 781, Dunedin 9054
Telephone (03) 484 7588
Email: info@citilab.co.nz
Website: www.citilab.co.nz

Sample – 39119 : Martin Lawn – Bore Water Batch 75110

Determinants	Results (mg/L or specified)	MAV[1] or GV[2]	Target range	Comments
Acidity	**7**	**-**	**Low**	**OK**
Alkalinity	**180**	**-**	**Low**	**High**
Bromide	**<0.1**	**-**	**Low**	**OK**
Chloride	**1.7**	**250**	**125**	**OK**
Fluoride	**<0.1**	**-**	**Low**	**OK**
Colour	**10 (<2.5 filtered)**	**-**	**<5.0**	**OK**
Total Manganese	**0.0080**	**<0.04**	**<0.04**	**OK**
Conductivity	**36**	**-**	**<40**	**OK**
Total Hardness	**185**	**200**	**50-80**	**High**
pH	**7.79**	**7.0 to 8.5**	**7.0 to 8.0**	**OK**
Phosphate	**<0.2**	**250**	**Low**	**OK**
Sulphate	**3.9**	**250**	**Low**	**OK**
Total Arsenic	**<0.0005**	**0.01**	**0.005**	**OK**
Turbidity	**4.1**	**2.5**	**<5**	**OK**
Total Calcium	**64.2**	**-**	**40**	**High**
Total Iron	**0.37**	**0.2**	**<0.2**	**High**
Total Magnesium	**5.96**	**-**	**10**	**OK**
E.Coli	**<1.0**	**<1.0**	**<1.0**	**OK**
Nitrate	**2.7**	**50**	**<25**	**OK**

[1]MAV means Maximum Acceptable Values quoted from Drinking Water Standards for New Zealand 2008. [2]GV means Guideline Values from the same source above.
mg/L equals to g/m³ and is often referred to as ppm (parts per million). < means less than.

The water was deemed **Suitable** for drinking purposes

The water has aesthetic issues due to the high iron value that may adversely affect the taste of the water and also cause staining of laundry and porcelain. The level of hardness may also lead to deposits in kettles and the like, and decrease the efficiency of laundry and kitchen detergents.

Graham Mason
CITILAB

Hill Laboratories
TRIED, TESTED AND TRUSTED

R J Hill Laboratories Limited
28 Duke Street Frankton 3204
Private Bag 3205
Hamilton 3240 New Zealand

T 0508 HILL LAB (44 555 22)
T +64 7 858 2000
E mail@hill-labs.co.nz
W www.hill-laboratories.com

Certificate of Analysis

Client:	Civilised Limited	**Lab No:**	2628271 DWAPv1
Contact:	John McCartney	**Date Received:**	03-Jun-2021
	C/- Civilised Limited	**Date Reported:**	09-Jun-2021
	PO Box 1461	**Quote No:**	
	Queenstown 9348	**Order No:**	
		Client Reference:	Martin Lawn 1
		Submitted By:	John McCartney

Sample Type: Aqueous

		Sample Name:	Martin Lawn 1 02-Jun-2021 2:00 pm	Guideline Value	Maximum Acceptable Values (MAV)
		Lab Number:	2628271.1		
Routine Water + E.coli profile Kit					
Escherichia coli	MPN / 100mL		< 1	-	< 1
Routine Water Profile					
Turbidity	NTU		1.15	< 2.5	-
pH	pH Units		8.2	7.0 - 8.5	-
Total Alkalinity	g/m³ as $CaCO_3$		157	-	-
Free Carbon Dioxide	g/m³ at 25°C		2.0	-	-
Total Hardness	g/m³ as $CaCO_3$		189	< 200	-
Electrical Conductivity (EC)	mS/m		34.9	-	-
Electrical Conductivity (EC)	µS/cm		349	-	-
Approx Total Dissolved Salts	g/m³		230	< 1000	-
Total Arsenic	g/m³		< 0.0011	-	0.01
Total Boron	g/m³		< 0.0053	-	1.4
Total Calcium	g/m³		64	-	-
Total Copper	g/m³		0.00190	< 1	2
Total Iron	g/m³		0.025	< 0.2	-
Total Lead	g/m³		0.00012	-	0.01
Total Magnesium	g/m³		6.9	-	-
Total Manganese	g/m³		0.00157	< 0.04 (Staining) < 0.10 (Taste)	0.4
Total Potassium	g/m³		1.65	-	-
Total Sodium	g/m³		2.9	< 200	-
Total Zinc	g/m³		0.0113	< 1.5	-
Chloride	g/m³		1.7	< 250	-
Nitrate-N	g/m³		0.56	-	11.3
Sulphate	g/m³		2.9	< 250	-

Note: The Guideline Values and Maximum Acceptable Values (MAV) are taken from the publication 'Drinking-water Standards for New Zealand 2005 (Revised 2018)', Ministry of Health. Copies of this publication are available from https://www.health.govt.nz/publication/drinking-water-standards-new-zealand-2005-revised-2018

The Maximum Acceptable Values (MAVs) have been defined by the Ministry of Health for parameters of health significance and should not be exceeded. The Guideline Values are the limits for aesthetic determinands that, if exceeded, may render the water unattractive to consumers.

Note that the units g/m³ are the same as mg/L and ppm.

Routine Water Assessment for Sample No 2628271.1 - Martin Lawn 1 02-Jun-2021 2:00

pH/Alkalinity and Corrosiveness Assessment
The pH of a water sample is a measure of its acidity or basicity. Waters with a low pH can be corrosive and those with a high pH can promote scale formation in pipes and hot water cylinders.
The guideline level for pH in drinking water is 7.0-8.5. Below this range the water will be corrosive and may cause problems with disinfection if such treatment is used.

The alkalinity of a water is a measure of its acid neutralising capacity and is usually related to the concentration of carbonate, bicarbonate and hydroxide. Low alkalinities (25 g/m^3) promote corrosion and high alkalinities can cause problems with scale formation in metal pipes and tanks.

The pH of this water is within the NZ Drinking Water Guidelines, the ideal range being 7.0 to 8.0.
With the pH and alkalinity levels found, it is unlikely this water will be corrosive towards metal piping and fixtures.
The high alkalinity of this water may cause an increase in the pH in the root zones of plants which are irrigated using this water.

Hardness/Total Dissolved Salts Assessment
The water contains a low amount of dissolved solids and would be regarded as being hard.
There will be difficulty in forming a lather with soap, and a 'scum' will form in baths, showers, etc.

Nitrate Assessment
Nitrate-nitrogen at elevated levels is considered undesirable in natural waters as this element can cause a health disorder called methaemaglobinaemia. Very young infants (less than six months old) are especially vulnerable. The Drinking-water Standards for New Zealand 2005 (Revised 2018) suggests a maximum permissible level of 11.3 g/m^3 as Nitrate-nitrogen (50 g/m^3 as Nitrate).

Nitrate-nitrogen was detected in this water but at such a low level to not be of concern.

Boron Assessment
Boron may be present in natural waters and if present at high concentrations can be toxic to plants.
Boron was not detected in this water.

Metals Assessment
Iron and manganese are two problem elements that commonly occur in natural waters. These elements may cause unsightly stains and produce a brown/black precipitate. Iron is not toxic but manganese, at concentrations above 0.5 g/m^3, may adversely affect health. At concentrations below this it may cause stains on clothing and sanitary ware.

Iron was found in this water at a low level.
Manganese was found in this water at a low level.
Treatment to remove iron and/or manganese should not be necessary.

Bacteriological Tests
The NZ Drinking Water Standards state that there should be no Escherichia coli (E coli) in water used for human consumption. The presence of these organisms would indicate that other pathogens of faecal origin may be present. Results obtained for Total Coliforms are only significant if the sample has not also been tested for E coli.

Escherichia coli was not detected in this sample.

Final Assessment
All parameters tested for meet the guidelines laid down in the publication 'Drinking-water Standards for New Zealand 2005 (Revised 2018)' published by the Ministry of Health for water which is suitable for drinking purposes.

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Laboratories, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Aqueous

Test	Method Description	Default Detection Limit	Sample No
Routine Water Profile		-	1
Filtration, Unpreserved	Sample filtration through 0.45µm membrane filter. Performed at Hill Laboratories - Chemistry; 101c Waterloo Road, Christchurch.	-	1
Total Digestion	Nitric acid digestion. APHA 3030 E (modified) 23rd ed. 2017.	-	1
Turbidity	Analysis using a Hach 2100 Turbidity meter. Analysed at Hill Laboratories - Chemistry; 101c Waterloo Road, Christchurch. APHA 2130 B 23rd ed. 2017 (modified).	0.05 NTU	1
pH	pH meter. Analysed at Hill Laboratories - Chemistry; 101c Waterloo Road, Christchurch. APHA 4500-H^+ B 23rd ed. 2017. Note: It is not possible to achieve the APHA Maximum Storage Recommendation for this test (15 min) when samples are analysed upon receipt at the laboratory, and not in the field. Samples and Standards are analysed at an equivalent laboratory temperature (typically 18 to 22 °C). Temperature compensation is used.	0.1 pH Units	1
Total Alkalinity	Titration to pH 4.5 (M-alkalinity), autotitrator. Analysed at Hill Laboratories - Chemistry; 101c Waterloo Road, Christchurch. APHA 2320 B (modified for Alkalinity <20) 23rd ed. 2017.	1.0 g/m^3 as $CaCO_3$	1
Free Carbon Dioxide	Calculation: from alkalinity and pH, valid where TDS is not >500 mg/L and alkalinity is almost entirely due to hydroxides, carbonates or bicarbonates. APHA 4500-CO_2 D 23rd ed. 2017.	1.0 g/m^3 at 25°C	1
Total Hardness	Calculation from Calcium and Magnesium. APHA 2340 B 23rd ed. 2017.	1.0 g/m^3 as $CaCO_3$	1
Electrical Conductivity (EC)	Conductivity meter, 25°C. Analysed at Hill Laboratories - Chemistry; 101c Waterloo Road, Christchurch. APHA 2510 B 23rd ed. 2017.	0.1 mS/m	1
Electrical Conductivity (EC)	Conductivity meter, 25°C. APHA 2510 B 23rd ed. 2017.	1 µS/cm	1
Approx Total Dissolved Salts	Calculation: from Electrical Conductivity.	2 g/m^3	1
Total Arsenic	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017 / US EPA 200.8.	0.0011 g/m^3	1
Total Boron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017.	0.0053 g/m^3	1
Total Calcium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017.	0.053 g/m^3	1
Total Copper	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017 / US EPA 200.8.	0.00053 g/m^3	1
Total Iron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017.	0.021 g/m^3	1
Total Lead	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017 / US EPA 200.8.	0.00011 g/m^3	1
Total Magnesium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017.	0.021 g/m^3	1
Total Manganese	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017 / US EPA 200.8.	0.00053 g/m^3	1
Total Potassium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017.	0.053 g/m^3	1
Total Sodium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017.	0.021 g/m^3	1
Total Zinc	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B 23rd ed. 2017 / US EPA 200.8.	0.0011 g/m^3	1
Chloride	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) 23rd ed. 2017.	0.5 g/m^3	1
Nitrate-N	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) 23rd ed. 2017.	0.05 g/m^3	1
Sulphate	Filtered sample from Christchurch. Ion Chromatography. APHA 4110 B (modified) 23rd ed. 2017.	0.5 g/m^3	1
Escherichia coli	MPN count using Colilert (Incubated at 35°C for 24 hours) and 97 wells. Analysed at Hill Laboratories - Microbiology; 101c Waterloo Road, Hornby, Christchurch. APHA 9223 B 23rd ed. 2017.	1 MPN / 100mL	1

Document Set ID: 7096681
Version: 1, Version Date: 13/12/2021

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 03-Jun-2021 and 09-Jun-2021. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.

Graham Corban MSc Tech (Hons)
Client Services Manager - Environmental

Appendix D

Site and Soil Assessment

Onsite Wastewater Disposal Site & Soils Assessment

Use for Subdivision or Land Use Resource Consent

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

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

Site Description

Property Owner: Suzanne & Martin Lawn

Location Address: Eastburn Road
Crown Terrace
Queenstown

Legal Description (eg Lot3 DP1234) : Lot 20 DP 561087

List any existing consents related to waste disposal on the site: Nil

General description of development / source of waste water: Creation of one additional allotment and a new building platform.

The number and size of the lots being created: One new future dwelling, allotment is 2.63 ha

Site Assessment (refer to Tables R1 & R2 for setback distances to site features)

Land use: Farmland

Topography: Varies from flat to gently sloping in the area of the proposed building.

Slope angle: Max: 0 to 1:10 approximately

Aspect: Generally northwest at the new building platform

Vegetation cover: Grass

Areas of potential ponding: None expected

Ephemeral streams: None in vicinity

Drainage patterns and overland paths: Sheet flow leading to gullys off site eventually draining to the Kawarau River.

Flood potential (show with return period on site plan): Nil

Distance to nearest water body: > 100 m from disposal field

Water bores with 50m (reference ORC Maps): Nil (closest is ~230m from building platform)

Other Site Features: Nil

Slope stability assessment details – summarise any areas unsuitable for waste water irrigation. (Attach report if applicable): No slope stability issues noted on site.

(Highest potential) Depth to ground water:

Summer > 5m

Winter > 5m

Information Source Assessed given the test pit and topography

What is the potential for waste water to short circuit through permeable soils to surface and / or ground water?
With appropriate design and disposal field siting, potential for short circuiting will be minimal.

Soil Investigation (Appendix C)

Field investigation date: June 2021 by Geosolve

Number of test pit bores (C3.5.4): 3 test pits

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

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

Average depth of topsoil: 300mm

Indicative permeability (Appendix G) : > 1000 mm/day

Percolation test method (refer to B6 for applicability) : Assessed
(attach report if applicable)

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

Reasons for placing in stated category:
Site is underlain by loess which in turn is underlain by relatively free draining alluvial gravels. It is anticipated that disposal will be into the loess layer.

Loading rate, DLR (Table L1): 20 mm/day

Explanation for proposed loading rate: This is a conservative design loading rate for secondary treated effluent draining into category 4 soils.

Recommendations from site and soils assessment

Specify any design constraints
Specify any areas unsuitable for location of the disposal field
Specify any unsuitable treatment and/or disposal systems
Propose suitable mitigation to enable successful effluent treatment

1) The estimated wastewater generation from the future dwellings is 1,000 litres per day (based on five people at 200 litres per person per day).
2) The loading rate in the disposal trenches will be 20mm/day.
3) The area of the disposal field will be 50m².

Attachments Checklist

- [X] Copy of existing consents
- [✓] Soil investigation addendum
- [✓] To scale site plan, the following must be included on the plan:
  - Buildings
  - Boundaries
  - Retaining Walls
  - Embankments
  - Water bodies
  - Flood potential
  - Other septic tanks / treatment systems
  - Water bores
  - Existing and proposed trees and shrubs
  - Direction of ground water flow
  - North arrow

Note that an Otago Regional Council (ORC) consent may also be required to discharge domestic waste water to land if any of the following apply:

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

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

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

Tel: 03 442 5681

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

Company: Civilised Limited

Email: john@civilised.nz

Phone number: 027 2233036

Name: John McCartney

Signature: 

Date: 10th November 2021

Appendix E

Wastewater Feasibility Drawing

Subject site, Lot 20 DP 561087

Eastburn Road

Crown Range Road

Lot 20
40.64 ha
approximately

Bore C12/0101

Proposed
Building Platform

Lot 20
40.64 ha
approximately

Lot 10
2.63ha

Existing
Farm Shed

Preservation Lane

LEGEND

Groundwater Flow (anticipated)

ORC Consented Bore

B	10/11/2021	Revised underlying lots	JFM
A	23/06/2021	Initial Issue	JFM
REV	DATE	DESCRIPTION	APPROVED

CONSULTANT

Civilised Ltd

CIVILISED LTD
PO BOX 1461
QUEENSTOWN 9348

T: 027 223 3036
E: john@mccartneys.nz

JFM	23/06/2021
DESIGN	DATE
JFM	23/06/2021
DRAWN	DATE
JFM	23/06/2021
CHECKED	DATE

CLIENT

SUZANNE
&
MARTIN
LAWN

PROJECT/LOCATION

PROPOSED SUBDIVISION
EASTBURN ROAD, CROWN TERRACE

CONTRACT NUMBER: -

SCALE (AT A3): 1:5,000

TITLE

ON SITE WASTEWATER DISPOSAL
TOPOGRAPHICAL INFORMATION

DRAWING NUMBER: QS055-F-510

REVISION: A

Appendix F

Power Supply Confirmation

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

22 June 2021

John McCarthy
Civilised Limited

Sent via email only: john@civilised.nz

Dear John,

ELECTRICITY SUPPLY AVAILABILITY FOR A PROPOSED TWO LOT SUBDIVISION.
EASTBURN ROAD, CROWN TERRACE, QUEENSTOWN. LOT 20 DP 550017 & PART LOT 33 DP 417527.

Thank you for your inquiry outlining the above proposed development.

Subject to technical, legal and commercial requirements, Aurora Energy can make a Point of Supply[1] (PoS) available for this development.

Disclaimer

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

Next Steps

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

Yours sincerely

Niel Frear

CUSTOMER INITIATED WORKS MANAGER

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

Appendix G

Telecommunications Confirmation

Chorus Property Development Team
PO Box 9405
Waikato Mail Centre
Hamilton 3200
Telephone: 0800 782 386
Email: develop@chorus.co.nz

6 July 2021

Chorus Ref #: QST65825
Your Ref #:

Martin Lawn

Attention: **John McCartney**
Dear Sir / Madam

Property Development – QST: Eastburn Road, Crown Terrace. 1 New Lot.

Thank you for your enquiry regarding the above subdivision.

Chorus is pleased to advise that, as at the date of this letter, we would be able to provide COPPER telephone reticulation for this property development. In order to complete this reticulation, we require a contribution from you to Chorus' total costs of reticulating the development. Chorus' costs include the cost of network design, supply of telecommunications specific materials and supervising installation. At the date of this letter, our estimate of the contribution we would require from you is $1,840.00 (including GST).

We note that (i) the contribution required from you towards reticulation of the development, and (ii) our ability to connect the subdivision to the Chorus network, may (in each case) change over time depending on the availability of Chorus network in the relevant area and other matters.

If you decide that you wish to undertake reticulation of this property development, you will need to contact Chorus (see the contact details for Chorus Property Development Team above). We would recommend that you contact us at least 3 months prior to the commencement of construction at the subdivision. At that stage, we will provide you with the following:

- confirmation of the amount of the contribution required from you, which may change from the estimate as set out above;

- a copy of the Contract for the Supply and Installation of Telecommunications Infrastructure, which will govern our relationship with you in relation to reticulation of this property development; and

- a number of other documents which have important information regarding reticulation of the property development, including - for example - Chorus' standard subdivision lay specification.

Yours faithfully

Becky Mai
Property Development Coordinator

108 Eastburn Road, Cardrona
Subdivision
Preliminary and Detailed Site Investigation

For

Crown Range Holdings

October 2015

Davis Consulting Group Limited
Arrow Lane,
Arrowtown 9302
03 409 8664
Document ID: 15065

108 Eastburn Road

Subdivision,

Preliminary and Detailed Site Investigation

Document Status

Version	Purpose of Document	Prepared By	Reviewer	Review Date
A	Draft for review	FR	CP	22/10/15
O	FINAL	FR	GD	23/10/15

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

EXECUTIVE SUMMARY

Crown Range Holdings are seeking resource consent for subdivision and a change in landuse to establish a building platform at 108 Eastburn Road, Cardrona. Historically the property has been used as farmland and includes a set of sheep yards that have historically been used for sheep dipping activities. Sheep dip sites are included on the Hazardous Activities and Industries List (HAIL). Given the site has been exposed to hazardous activities, it is subject to the provisions of the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES).

In order to meet the requirements of the NES, Crown Range Holdings commissioned Davis Consulting Group Limited (DCG) to undertake a Preliminary and Detailed Site Investigation (PSI and DSI) to review the landuse history of the site, identify any potential contaminant risks and consider the risk to human health from the establishment and habitation associated with the proposed residential building platform.

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

- Review of the site history;
- Completion of a site inspection to examine the condition of the property;
- Collection of soil samples from 6 locations within and around the sheep yards to characterise heavy metal and pesticide concentrations in surface soils that may be associated with sheep dip products; and
- Based on research into the activities on the site and soil quality results, consideration of the risk to human health that may be associated with the proposed landuse change of the site.

Based on the findings of the PSI and DSI, the following conclusions are made:

- Historically the sheep yards have been used for sheep dipping activities;
- Current activities that occur on proposed Lot 7 include grazing livestock;
- The site is subject to the provisions of the NES due to the history of sheep dipping activities which are associated with organochlorine and heavy metal use;
- Based on the Contaminated Land Management Guidelines Schedule B, the hazardous substances that may be associated with sheep dip operations include a range of organochlorine pesticides and heavy metals;
- No organochlorine pesticides were detected in analysis of soils taken from the site;
- Heavy metal concentrations detected are all below the adopted guideline value and appear to largely represent background concentrations; and

- DCG considers it is highly unlikely that concentrations of contaminants within the soil at the sheep yard would be present at concentrations that will exceed the contaminant standards for a rural residential land use scenario.

In summary, the PSI and DSI have identified historical land use activities that may have impacted the soil quality of the site. Based on the results of this PSI and DSI, DCG concludes it is highly unlikely that there is a risk from the sheep yard to human health from the establishment of a residential building platform and the sheep yard site is fit for activities consistent with the rural residential landuse scenario set out in the NES.

1.0 INTRODUCTION

1.1 Purpose

Crown Range Holdings are seeking resource consent for subdivision and a change in landuse to establish a building platform at 108 Eastburn Road, Cardrona. Historically the property has been used as farmland and includes a set of sheep yards that have historically been used for sheep dipping activities. Sheep dip sites are included on the Hazardous Activities and Industries List (HAIL). Given the site has been exposed to hazardous activities, it is subject to the provisions of the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES).

In order to meet the requirements of the NES, Crown Range Holdings commissioned Davis Consulting Group Limited (DCG) to undertake a Preliminary and Detailed Site Investigation (PSI and DSI) to review the landuse history of the site, identify any potential contaminant risks and consider the risk to human health from the establishment and habitation associated with the proposed residential building platform. DCG'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 and DSI included the following:

- Review of the site history;
- Completion of a site inspection to examine the condition of the property;
- Collection of soil samples from 6 locations within and around the sheep yards to characterise heavy metal and pesticide concentrations in surface soils that may be associated with sheep dip products; and
- Based on research into the activities on the site and soil quality results, consideration of the risk to human health that may be associated with the proposed landuse change of the site; and
- Preparation of a Preliminary Site Investigation and Detailed Site Investigation (PSI and DSI) report in accordance with the requirements of the Contaminated Land Management Guidelines (CLMG) No. 1.

1.3 Limitations

The findings of this report are based on the Scope of Work outlined above. DCG 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, DCG'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 DCG 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 DCG personnel involved with the project, subject to the qualifications made above. While normal assessments of data reliability have been made, DCG assumes no responsibility or liability for errors in any data obtained from regulatory agencies, statements from sources outside DCG, or developments resulting from situations outside the scope of this project.

2.0 SITE LOCATION AND DESCRIPTION

2.1 Site Location

The site is located at 108 Eastburn Road, Cardrona and is within lot 3 DP 321835 (see Figure 1). It is situated on the Crown Terrace approximately 1 km north of the Kawarau River, 6.8 km southeast of Arrowtown township. The area under investigation is the sheep yards within proposed lot 7 and does not cover the surrounding pasture. The investigation of the sheep yard comprises an area of approximately 0.13 ha and is shown in Figure 2.

Central coordinates for the site are N 5570706 E 2186796 (NZMG).

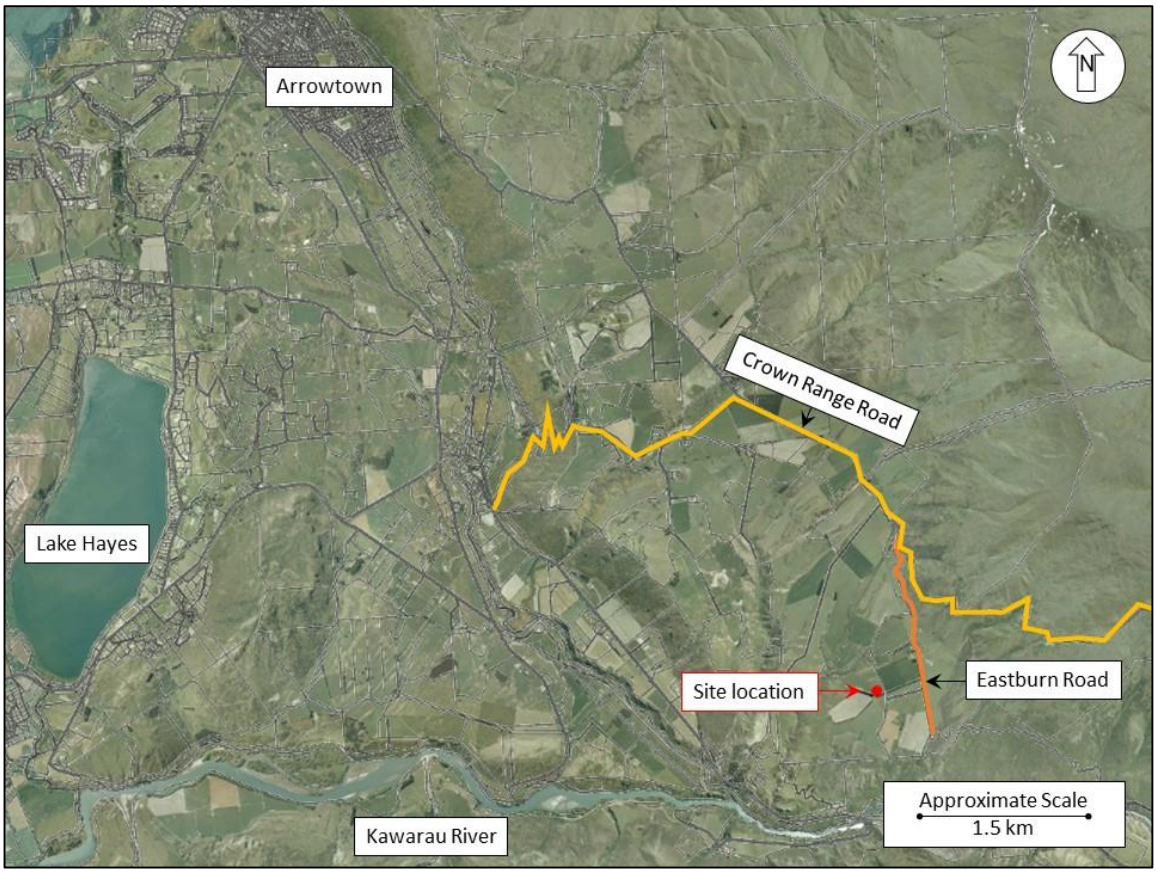


Figure 1: Site location plan

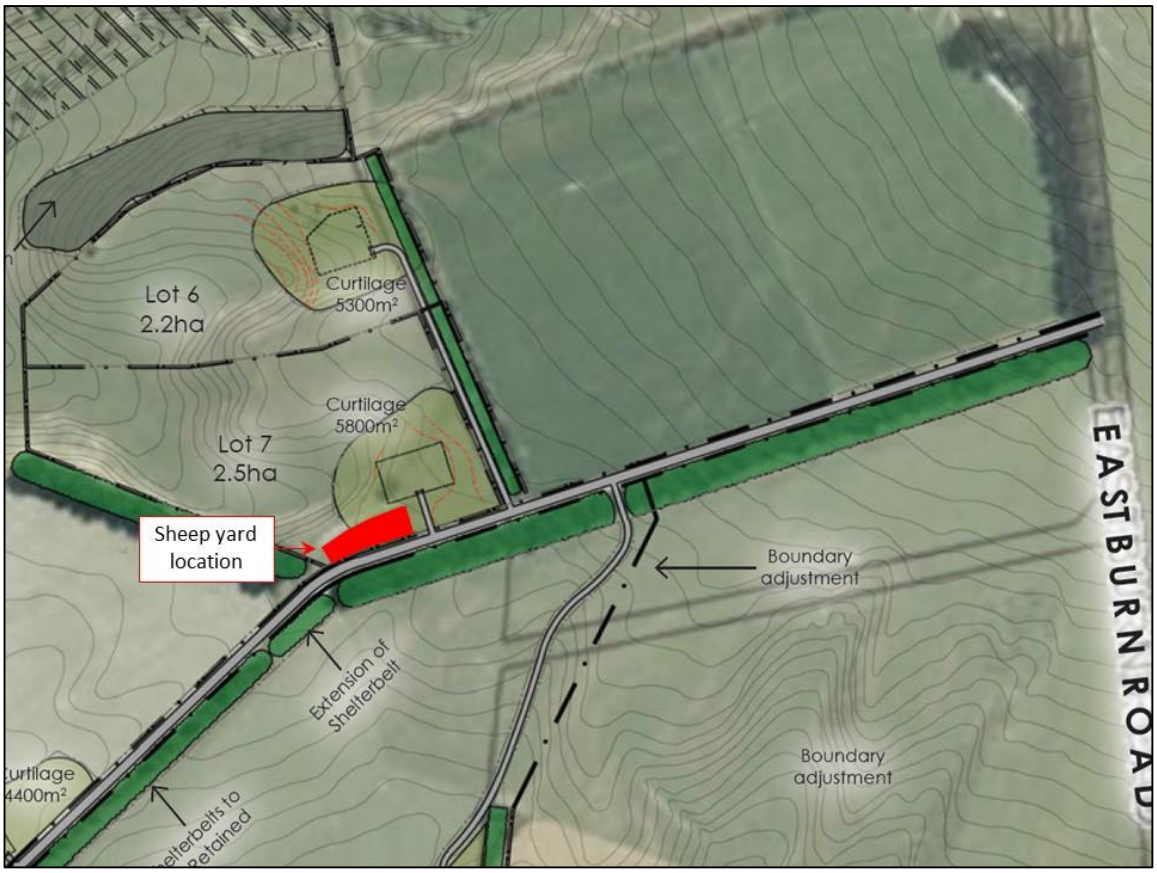


Figure 2: Proposed Subdivision Plan and Sheep Yard Location

2.2 Site History

The first reference of Eastburn being farmed is in circa late 1800s when Alfred Miller broke in land on the Crown Terrace which became known as the Eastburn run. Alfred's son Alec took over the farm in 1926. Alec's son W.Miller then took over the farm and soil it to Jimmy Little of Eastburn Station in 1943 (McDonald, 2010).

Eastburn has since been used for farming activities and more recently for grazing stock.

The historical certificate of title also reflects the site's history farming use with a transfer made in 1991 to Mark Richard Burdon, farmer. The historical Certificate of Title for the site is provided in Appendix B.

This investigation included interviews with the current farmer who used the sheep yards for sheep dipping. The farmer stated that he did not use sheep dip products containing heavy metals or organochlorine pesticides.

Dipping sheep to control lice was a legal requirement from 1850s to early 1990s and during that time period various chemicals were used. Organochlorines were used from 1945 through to 1961 when the use of organochlorines were banned. Arsenic was used from the 1840s through to 1980 (MfE, 2006). Although these chemicals have been banned many years ago some sheep dip sites had continued to use banned chemicals.

Organochlorines and heavy metals bind strongly to surface soils and for this reason, soil sampling is required to confirm the presence of these contaminants.

2.2.1 Contaminants Commonly Associated with the Landuse

Based on the Contaminated Land Management Guidelines Schedule B, the hazardous substances that may be associated with former sheep dipping activities on the site include a range of organochlorine pesticides and heavy metals.

2.3 Additional Site Information

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

Records held on the Otago Regional Council's "Database of Selected Landuses" show there are no identified land-uses associated with the above site.

The database identifies sites where activities have occurred that are known to have the potential to contaminate land. The record of a property in the database does not necessarily imply contamination. Similarly, the absence of available information does not necessarily mean that the property is uncontaminated; rather no information exists on the database.

The following provides a summary of information that the CLMG No. 1 (MfE, 2003a) indicates should be included in a PSI report:

- Presence of drums – No drums were recorded during the site visit.
- Wastes – No wastes were present on the site.
- Fill materials – No imported fill was present on site.
- Odours – No odours were noted.
- Flood risk – According to the QLDC hazard maps there are no natural hazards associated with the site.
- Surface water quality – No surface water was observed on site.
- Site boundary condition – The paddock fences which define the boundaries of Lot 3 DP 321,835 are deer fenced.
- Visible signs of contamination – No visible signs of contamination.
- Local sensitive environments – The nearest sensitive environment is the Kawarau River 1 km south of the site.

This investigation included a review of the property file for 108 Eastburn Road, Cardorna held by the Queenstown Lakes District Council. The file contained a Resource Consent for a subdivision in 1994 and various Building Permits for erection of tunnel barns, small dwelling, kitchen extensions and fireplace installation. The property file did not contain files suggesting any hazardous activities have taken place on the property.

2.4 Site Condition and Surrounding Environment

Lot 3 DP321835 and neighbouring lots are zoned rural general under the QLDC District Plan. The QLDC hazard maps indicate the sheep yard is located within an alluvial fan.

The sheep yards are surrounded by pasture and to the north is a set of cattle yards. The cattle yards are not considered to be a hazardous activity. The current use of lot 3 DP 321835 grazing livestock.

During the site walkover there were no obvious signs of contamination or other hazardous activities. The land was in a tidy and well maintained condition.

Plates 1-2 present pictures of the sheep yards.

Plate 1: Looking northeast across sheep yard and cattle yard

Plate 2: Looking South across sheep yard.

2.5 Geology and Hydrogeology

The subject site is situated 1 km north of the Kawarau River on a geology of a till in moraine remnants and associated outwash gravel (Turnbull, 2000). The surface soils were described during the collection of soil samples for the DSI as medium brown SILT with organic matter. Soil descriptions are provided in Appendix C.

According to the QLDC hazard maps the only natural hazard present on the subject site is an alluvial fan.

There are no surface water bodies found on site. The nearest natural surface water body is the Kawarau River, located approximately 1 km to the south.

The site is not included within the Wakatipu Basin aquifer system. The location of groundwater bores within a 1 km radius of the site (held by the Otago Regional Council) revealed that there are no consented bores within 1 km of the sheep yard location.

3.0 SAMPLING AND ANALYSIS PLAN

3.1 Data Quality Objectives

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

- Characterise the nature of contamination associated with the historical use of the sheep yard site; and
- Determine the risk of any soil contamination encountered onsite to human health, based on the proposed rural residential landuse of the site.

3.2 Sampling and Analysis Plan

The sampling and analysis plan was designed to address the specific objectives, namely the characterisation of contaminants in soil associated with sheep dipping activities.

3.3 Sampling Rationale

The sampling rationale was designed to address the possible use of sheep dip products containing organochlorine pesticides and heavy metals within the top soil of the sheep yard area. Six surface samples (0-0.1 m) were collected using a judgemental sampling plan with samples located at the entry and exits and within the pens of the sheep yard. Sample locations are shown in Figure 3.

Surface sampling was considered appropriate for the assessment of pesticides for following reasons.

- Pesticides and heavy metals generally bind strongly to soils, generally remaining in the surface profile, and
- People living on the site will predominantly be exposed to surface soils.

Figure 3: Sampling Location Plan

3.4 Soil Sampling Methodology

Soil sampling was undertaken with the use of a spade. The following procedures were applied during the soil sampling process to gain representative samples:

- Field personnel wore a fresh pair of nitrile gloves between sampling events.
- Soil samples were transferred to 250 mL glass jars with Teflon lids as supplied by Hill Laboratories.
- All soil samples were unambiguously marked in a clear and durable manner to permit clear identification of all samples in the laboratory.
- All samples were immediately placed in a cooled chilly bin to reduce the potential for volatilisation of should volatile contaminants be present.

3.5 Analytical Parameters

The laboratory analytical suite determined for the site investigation is in recognition of our understanding of the current and historical use of the subject site. DCG understands the site was historically used for sheep dipping activities at the sheep yards therefore the following contaminants were analysed for their presence on site:

- Heavy metals and organochlorine pesticides (including 4,4-DDE, 2,4-DDT and Dieldrin).

The laboratory methods utilised for the analysis are provided in the laboratory report (see Appendix D).

3.6 Soil Sample Field and Laboratory QA/QC

The field QA/QC procedures performed during the soil sampling are listed as follows:

- Use of standardised field sampling forms and methods;
- Samples were transferred under chain of custody procedures;
- All samples were labelled to show point of collection, project number, and date;
- Headspace in sample jars was avoided;
- The threads on the sampling jars were cleaned to avoid VOC loss; and
- All samples were stored in a cooled chilly bin containing ice while in the field.

All soil samples were kept refrigerated until couriered to Hill Laboratories. Hill Laboratories is IANZ accredited for the analysis of heavy metals and pesticides. Hill Laboratories conduct internal QA/QC in accordance with IANZ requirements.

3.7 Soil Guideline Values

Soil guideline values (SGVs) selected for application on this project are provided in Table 1. The guidelines were adopted with reference to the Contaminated Land Management Guidelines No. 2: Hierarchy and Application in New Zealand of Environmental Guideline Values (MfE, 2003b).

The heavy metal and organochlorine pesticide soil guideline values adopted for the site assessment were based on either the Soil Contaminant Standards (New Zealand 'Users' Guide: NES for Assessing & Managing Contaminants in Soil to Protect Human Health, 2012) or Schedule B (1) Guideline on the Investigation Levels for Soil and Groundwater (National Environment

Protection (Assessment of Site Contamination) Measure, 1999). Guidelines for rural residential land use have been adopted for this site investigation based on proposed establishment of a residential building platform. Where the National Environmental Protection Measures (1999) were adopted, the most conservative values were selected for the purposes of this assessment.

Table 1: Soil Guidelines

Analyte	Guideline
Heavy Metals and Organochlorine Pesticides	1. Soil Contaminant Standards *in* New Zealand 'Users' Guide: NES for Assessing & Managing Contaminants in Soil to Protect Human Health 2012 (MfE, 2012). 2. Schedule B (1) Guideline on the Investigation Levels for Soil and Groundwater *in* National Environment Protection (Assessment of Site Contamination) Measure 2013 (NEPC, 2013).

3.8 Soil Analytical Result Review

Following the receipt of laboratory data, a detailed review of the data was performed to determine its accuracy and validity. All laboratory data was checked for analytical and typographical errors.

Once the data quality was established the soil data was checked against the Sampling Program DQOs.

One field duplicate soil sample was collected during the site investigation and analysed to review the reproducibility of the laboratory analysis. Acceptable percentage difference between duplication samples is discussed in section 4.

All organochlorine pesticide results were below the laboratory detection limit. Results are presented in Appendix D.

4.0 INVESTIGATION RESULTS

4.1 Analytical Results

The soil sample locations are provided in Figure 3 and summarised in Table 2 below.

Table 2: Soil Sample Summary Table

Sample Identification	Sample Depth (m)	Analysis
EB#1(0.1)	0-0.1	Heavy Metals and Organochlorine Pesticides
EB#2(0.1)	0-0.1	
EB#3(0.1)	0-0.1	
EB#4(0.1)	0-0.1	
EB#5(0.1)	0-0.1	
EB#6(0.1)	0-0.1	

4.1.1 Heavy Metals

The heavy metal results are presented in **Error! Reference source not found.** and summarised as follows:

- All of the heavy metal results were below the adopted guideline values; and
- The concentrations of heavy metals detected are fairly consistent across all samples analysed and appear to represent background concentrations.

4.1.2 Organochlorine Pesticides

All pesticide concentrations were reported below laboratory detection limits. The organochlorine pesticide results are presented in Appendix D.

4.1.3 Laboratory Procedures

Hill Laboratories completed specific in-house QA/QC analysis during the processing of the soil samples. The chain of custody form and the Hill Laboratories results are provided in Appendix D.

Table 3: Heavy Metal Results (mg/kg)

	EB #1	EB #2	EB #3	EB #4	EB #5	EB #6	Guideline
Arsenic	13	13	12	12	8	11	17
Cadmium	0.14	0.14	0.1	< 0.10	0.12	0.11	0.8
Chromium	28	33	32	29	21	29	>10,000
Copper	23	29	26	24	28	24	>10,000
Lead	12.3	13.6	13.4	13.7	9.7	13.2	160
Nickel	26	32	28	27	21	28	400
Zinc	90	103	109	80	100	101	7,400

< denotes concentration below laboratory detection limits
[1] Appendix B Soil Contaminant Standards in New Zealand 'Users' Guide: NES for Assessing & Managing Contaminants in Soil to Protect Human Health 2012 (MfE, 2012).
[2] Schedule B (1) Guideline on the Investigation Levels for Soil and Groundwater in National Environment Protection (Assessment o
Site Contamination) Measure 2013 Volume 2 (NEPC, 2013).

4.1.4 Field Duplicates

One field duplicate soil sample was collected during the site investigation and analysed to review the reproducibility of the laboratory analysis. The duplicate and the corresponding sample results are presented in Table 4 below.

Table 4: Duplicate Percentage Differences

	EB #1 (0.1)	Dup1	% Difference
Arsenic	13	11	16
Cadmium	0.14	0.15	6.9
Chromium	28	28	0
Copper	23	23	0
Lead	12.3	11.9	3.3
Nickel	26	27	3.7
Zinc	90	94	4.3

An acceptable percentage difference between duplication samples is less than 30 to 50 % (MfE, 2011). The highest relative percentage difference was 16 % (for arsenic), which is considered acceptable for soil analysis. The QA/QC analysis indicates the sampling and analysis undertaken was reproducible.

5.0 CONCLUSIONS

Based on the findings of the PSI and DSI, the following conclusions are made:

- Historically the sheep yards have been used for sheep dipping activities;
- Current activities that occur within proposed Lot 7 include grazing livestock;
- The site is subject to the provisions of the NES due to the history of sheep dipping activities which are associated with organochlorine and heavy metal use;
- No organochlorine pesticides were detected in analysis of soils taken from the site;
- Heavy metal concentrations detected are all below the adopted guideline values and appear to largely represent background concentrations; and
- DCG considers it is highly unlikely that concentrations of contaminants within the soil at the sheep yard would be present at concentrations that will exceed the contaminant standards for a rural residential land use scenario.

In summary, the PSI and DSI have identified historical land use activities that may have impacted the soil quality of the site. Based on the results of this PSI and DSI, DCG concludes it is highly unlikely that there is a risk to human health from the establishment of a residential building platform and the sheep yard site is fit for activities consistent with the rural residential landuse scenario set out in the NES.

6.0 REFERENCES

McDonald, B. (2010) *Queenstown's Farms & Sheep Stations. Families that Farmed the Land.*

Ministry for the Environment (2003a) *Contaminated Land Management Guidelines No. 1: Reporting on Contaminated Sites in New Zealand.*

Ministry for the Environment (2003b) *Contaminated Land Management Guidelines No. 2: Hierarchy and Application in New Zealand of Environmental Guideline Values.*

Ministry for the Environment (2006) *Identifying, Investigating and Managing Risks Associated with Former Sheep-dip Sites*: Ministry for the Environment.

Ministry for the Environment (2012) *Users' Guide: National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health*. Wellington: Ministry for the Environment.

National Environment Protection Council (NEPC) (1999) *National Environment Protection (Assessment of Site Contamination) Measure - Schedule B (1) Guideline on Investigation Levels for Soil and Groundwater.* National Environment Protection Council.

Queenstown Lakes District Council (QLDC) Webmaps. Accessed 16/10/2015 http://maps.qldc.govt.nz/qldcviewer/

QLDC E Document Viewer. Accessed 16/10/2015 https://edocs.qldc.govt.nz/

Turnbull, I.M. (compiler) (2000) *Geology of the Wakatipu area.* Institute of Geological & Nuclear Sciences 1:250 000 geological map 18. 1 sheet + 72 p. Lower Hutt, New Zealand. Institute of Geological & Nuclear Sciences Ltd.

Appendices

Appendix A

Davis Consulting Group Contaminated Land Experience

Davis Consulting Group Contaminated Land Experience

Glenn Davis is the director of Davis Consulting Group and has over 15 years post graduate experience working as an Environmental Scientist. Glenn has accumulated a significant volume of work experience in the contaminated land field undertaking preliminary site investigations (PSIs), detailed site investigations (DSIs) and remediation projects in New Zealand, Australia, Asia, the United Kingdom and Ireland. The following provides a summary of Glenn Davis's experience.

Davis Consulting Group (2007 – present): Principal Environmental Scientist – completed multiple preliminary and detailed site investigations in Otago and Southland predominantly for the land development industry. In addition to undertaking investigation and remedial work DCG advises the Southland Regional Council on contaminated land matters including the review of consultant reports and consent applications. Key projects DCG has undertaken include:

- Review of groundwater contamination associated with the former Invercargill gasworks site including the completion of a groundwater investigation and completion of an environmental risk assessment report to support a discharge consent application;
- Completion of site investigations on former landfills in Invercargill to consider the suitability of the sites for commercial/industrial development;
- Management of the removal of an underground fuel tank in Gore and subsequent groundwater investigation; and
- Completion of a number of detailed site investigations in the Te Anau area to consider the suitability of former farm land for residential development.

Arrow Lane, Arrowtown, New Zealand p: 03.409 8664 e: glenn.davis@davisconsultinggroup.co.nz

RPS Australia (2003 – 2006): Supervising Environmental Scientist managing multiple detailed site investigations in the land development industrial and operated as an environmental specialist for Chevron on Barrow Island monitoring and managing a number of large contaminated groundwater plumes.

URS Ireland (2001 – 2003): - Senior Environmental Scientist undertaking multiple PSIs and DSIs on services stations and train station throughout Ireland. Glenn was also involved in the design and operation of a number of large scale remediation projects, predominantly associated with the removal of hydrocarbon contaminated soil and recovery or hydrocarbons impacting groundwater.

ERM Australia (1998 – 2000) – Working as a project level environmental scientist Glenn completed in excess of 30 detailed site investigations and remedial projects on service stations, concrete batching plants, and transport depots.

Appendix B

Historical Certificates of Title

COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952

Historical Search Copy

R.W. Muir
Registrar-General
of Land

Identifier **OT12C/365**
Land Registration District **Otago**
Date Issued 17 February 1989

Cancelled

Prior References
OT10D/441

Estate	Fee Simple
Area	21.7793 hectares more or less
Legal Description	Lot 14 Deposited Plan 20799

Original Proprietors
Royalburn Farming Company Limited

Interests

436746 Agreement pursuant to Section 30 Soil Conservation and Rivers Control Act 1941 - 24.2.1975 at 10.06 am

722238.8 Easement Certificate specifying the following easements - 17.2.1989 at 10.18 am

Type	Servient Tenement	Easement Area	Dominant Tenement	Statutory Restriction
Stock yard	Lot 14 Deposited Plan 20799 - herein	A DP 20799	Lot 1 Deposited Plan 20799 - CT OT12C/363	Section 309(1)(a) Local Government Act 1974
Stock yard	Lot 14 Deposited Plan 20799 - herein	A DP 20799	Lot 13 Deposited Plan 20799 - CT OT12C/364	Section 309(1)(a) Local Government Act 1974
Stock yard	Lot 14 Deposited Plan 20799 - herein	A DP 20799	Lot 19 Deposited Plan 20799 - CT OT12C/366	Section 309(1)(a) Local Government Act 1974
Stock lane	Lot 14 Deposited Plan 20799 - herein	B DP 20799	Lot 1 Deposited Plan 20799 - CT OT12C/363	Section 309(1)(a) Local Government Act 1974
Stock lane	Lot 14 Deposited Plan 20799 - herein	B DP 20799	Lot 13 Deposited Plan 20799 - CT OT12C/364	Section 309(1)(a) Local Government Act 1974
Stock lane	Lot 14 Deposited Plan 20799 - herein	B DP 20799	Lot 19 Deposited Plan 20799 - CT OT12C/366	Section 309(1)(a) Local Government Act 1974
Stock lane	Lot 14 Deposited Plan 20799 - herein	C DP 20799	Lot 1 Deposited Plan 20799 - CT OT12C/363	Section 309(1)(a) Local Government Act 1974
Stock lane	Lot 14 Deposited Plan 20799 - herein	C DP 20799	Lot 13 Deposited Plan 20799 - CT OT12C/364	Section 309(1)(a) Local Government Act 1974
Stock lane	Lot 14 Deposited Plan 20799 - herein	C DP 20799	Lot 19 Deposited Plan 20799 - CT OT12C/366	Section 309(1)(a) Local Government Act 1974

782645 Mortgage to The National Bank of New Zealand Limited - 4.7.1991 at 9.05 am

15C/568 Deed of Easement - 10.10.1994 at 9.22 am

Type	Servient Tenement	Easement Area	Dominant Tenement
Store and convey water	Part Run 632 Kawarau Survey District - CT OTA2/1318	A OT15C/568	Lot 14 Deposited Plan 20799 - herein
Store and convey water	Part Run 632 Kawarau Survey District - CT OTA2/1318	B OT15C/568	Lot 14 Deposited Plan 20799 - herein

5665130.1 Discharge of Mortgage 782645 - 22.7.2003 at 9:00 am

5665130.2 Surrender of the Stock lane and Stock yard easement created by Transfer 722238.8 - 22.7.2003 at 9:00 am

Identifier **OT12C/365**

5665130.3 CTs issued - 22.7.2003 at 9:00 am

Legal Description	**Title**
Lot 1 Deposited Plan 321835	87259
Lot 2 Deposited Plan 321835	87260

CANCELLED

Identifier **OT12C/365**

References
Prior C/T 100/441

Transfer No
N/C Order No 722238/6

Land and Deeds 69

REGISTER

No. 12 C / 365

CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT

This Certificate dated the 17th day of February one thousand nine hundred and Eighty Nine under the seal of the District Land Registrar of the Land Registration District of OTAGO

WITNESSETH that MICHAEL STUART JONES of Auckland, Company Director

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 21.7793 hectares more or less being Lot 14 Deposited Plan 20799 and being Part Sections 11, 12 and 14 Block I KAWARAU SURVEY DISTRICT

ASSISTANT LAND REGISTRAR

Interests at Date of Issue:

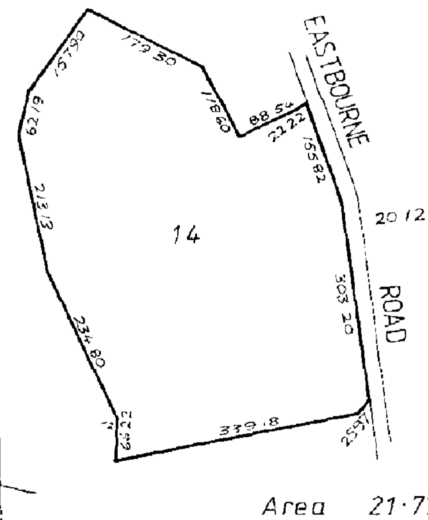
436746 Agreement pursuant to Section 30 of the Soil Conservation and Rivers Control Act 1941 - 24.2.1975 at 10.06am

632051 Land Improvement Agreement under the Soil Conservation and Rivers Control Act 1941 - 22.3.1985 at 10.17am

DISCHARGED 20 APR 1990 A.L.R.

706000 Mortgage to Ernest John Leslie Guthrie, Howard James Peterson and John McCrae Martin in shares - 1.7.1988 at 10.50am

EXERCISED 722238/2



Measurements are Metric

707592 Mortgage to Mutual Finance (now) National Mutual Finance Limited - 21.7.1968 at 9.42am

DISCHARGED 17 SEP 1990 A.L.R.

722238/2 Mortgage to The Rural Banking and Finance Corporation of New Zealand - 17.2.1989 at 10.18am

(TRANSFER)

722238/3 Memorandum of Priority ranking Mortgage 722238/2 as a first mortgage and Mortgage 706000 as a second mortgage - 17.2.1989 at 10.18am

The easements specified in the memorandum on D.P. 20799 are required to be created pursuant to Section 309(1)(a) Local Government Act 1974

A.L.R

722238/8 Easement Certificate certifying that the following easements are intended to be created in terms of DP 20799:
a) a stock yard right over Part herein marked "A" appurtenant to Lots 1 (12C/363), 13 (12C/364), 19(12C/366)
b) a stock lane right over part herein marked "B" appurtenant to Lots 1 (12C/363), 13(12C/364), 19(12C/366)
c) a stock lane right over part herein marked "C" appurtenant to Lots 1 (12C/363), 13(12C/364), 19(12C/366) - 17.2.1989 at 10.18am

A.L.R

OVER...

12 C / 365

The easements specified in Easement Certificate 722238/8 when created will be subject to Section 309(1)(a) Local Government Act 1974

A.L.R.

734984 Caveat by Hughes Earthmoving Limited entered 8.8.1989 at 9.14am

A.L.R.

735996 Caveat by Charles Hughes entered 22.8.1989 at 9.06 am

A.L.R.

740252/3 Charging Order (Nisi) in action between National Mutual Credit Limited and [illegible] 1989 at 9.02am

A.L.R

759860 Charging Order (absolute) in action between Mase Financial Services Limited and Michael Stuart Jones - 30.7.1990 at 10.20am

A.L.R

780995/8 Transfer in exercise of Power of Sale in Mortgage 722238/2 to Mark Richard Burdon of Arrowtown, Farmer - 11.6.1991 at 10.05am

A.L.R.

782645 Mortgage to The National Bank of New Zealand Limited - 4.7.1991 at 9.05am

A.L.R.

866952/1 Transfer to Royalburn Farming Company Limited - 10.10.1994 at 9.22am

A.L.R.

Appurtenant hereto is a right to store and convey water with incidental rights over part Run 632 Kawarau SD (CT A2/1318) shown marked A and B on the diagram annexed to Deed embodied in the Register as CT 15C/568 created by the said Deed - 10.10.1994 at 9.22am

A.L.R.

Appendix C

Soil Profile Log

SOIL PROFILE LOGS

PROJECT NUMBER: 15063 FIELD STAFF: Fiona R DATE: 30/09/2015

SITE NAME: Eastburn Sheep Yard METHOD: Spade WEATHER: Fine and windy

Sample Location	Coordinates		Sample Depth (m)	Sample ID	Soil Lithology
1	-44.999722	168.899972	0-0.1	EB #1 (0.1)	Med brown SILT with organic matter
2	-44.999249	168.900017	0-0.1	EB #2 (0.1)	Greyish brown SILT with some cobbles and organic matter
3	-44.999250	168.899805	0-0.1	EB #3 (0.1)	Dark freyish brown SILT with cobbles and organic matter
4	-44.999250	168.899694	0-0.1	EB #4 (0.1)	Dark freyish brown SILT with cobbles and organic matter
5	-44.999215	168.899454	0-0.1	EB #5 (0.1)	Med greyish brown SITL with cobbles and organic matter
6	-44.999208	168.899804	0-0.1	EB #6 (0.1)	Light yellowish brown SILT with cobbles and organic matter

Appendix D

Laboratory analytical certificate and results

Hill Laboratories
BETTER TESTING BETTER RESULTS

R J Hill Laboratories Limited
1 Clyde Street
Private Bag 3205
Hamilton 3240, New Zealand

Tel +64 7 858 2000
Fax +64 7 858 2001
Email mail@hill-labs.co.nz
Web www.hill-labs.co.nz

ANALYSIS REPORT

Client:	Davis Consulting Group Limited	**Lab No:**	1482879	SPv1
Contact:	Fiona Rowley	**Date Registered:**	01-Oct-2015	
	C/- Davis Consulting Group Limited	**Date Reported:**	08-Oct-2015	
	PO Box 2450	**Quote No:**		
	Wakatipu	**Order No:**		
	QUEENSTOWN 9349	**Client Reference:**	Eastburn	
		Submitted By:	Fiona Rowley	

Sample Type: Soil

Sample Name:		EB #1 (0.1) 30-Sep-2015 12:40 pm	EB #2 (0.1) 30-Sep-2015 12:45 pm	EB #3 (0.1) 30-Sep-2015 12:50 pm	EB #4 (0.1) 30-Sep-2015 12:55 pm	EB #5 (0.1) 30-Sep-2015 1:00 pm
Lab Number:		1482879.1	1482879.2	1482879.3	1482879.4	1482879.5
Heavy metal screen level As,Cd,Cr,Cu,Ni,Pb,Zn						
Total Recoverable Arsenic	mg/kg dry wt	13	13	12	12	8
Total Recoverable Cadmium	mg/kg dry wt	0.14	0.14	0.10	< 0.10	0.12
Total Recoverable Chromium	mg/kg dry wt	28	33	32	29	21
Total Recoverable Copper	mg/kg dry wt	23	29	26	24	28
Total Recoverable Lead	mg/kg dry wt	12.3	13.6	13.4	13.7	9.7
Total Recoverable Nickel	mg/kg dry wt	26	32	28	27	21
Total Recoverable Zinc	mg/kg dry wt	90	103	109	80	100
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
alpha-BHC	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
beta-BHC	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
delta-BHC	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
gamma-BHC (Lindane)	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
cis-Chlordane	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
trans-Chlordane	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Chlordane [(cis+trans)* 100/42]	mg/kg dry wt	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
2,4'-DDD	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
4,4'-DDD	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
2,4'-DDE	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
4,4'-DDE	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
2,4'-DDT	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
4,4'-DDT	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Dieldrin	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Endosulfan I	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Endosulfan II	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Endosulfan sulphate	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Endrin	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Endrin aldehyde	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Endrin ketone	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Heptachlor	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Heptachlor epoxide	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Hexachlorobenzene	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Methoxychlor	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010

Sample Type: Soil						
Sample Name:		EB #6 (0.1) 30-Sep-2015 1:05 pm	Dup1 30-Sep-2015 12:41 pm			
Lab Number:		1482879.6	1482879.7			
Heavy metal screen level As,Cd,Cr,Cu,Ni,Pb,Zn						
Total Recoverable Arsenic	mg/kg dry wt	11	11	-	-	-
Total Recoverable Cadmium	mg/kg dry wt	0.11	0.15	-	-	-
Total Recoverable Chromium	mg/kg dry wt	29	28	-	-	-
Total Recoverable Copper	mg/kg dry wt	24	23	-	-	-
Total Recoverable Lead	mg/kg dry wt	13.2	11.9	-	-	-
Total Recoverable Nickel	mg/kg dry wt	28	27	-	-	-
Total Recoverable Zinc	mg/kg dry wt	101	94	-	-	-
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.010	< 0.010	-	-	-
alpha-BHC	mg/kg dry wt	< 0.010	< 0.010	-	-	-
beta-BHC	mg/kg dry wt	< 0.010	< 0.010	-	-	-
delta-BHC	mg/kg dry wt	< 0.010	< 0.010	-	-	-
gamma-BHC (Lindane)	mg/kg dry wt	< 0.010	< 0.010	-	-	-
cis-Chlordane	mg/kg dry wt	< 0.010	< 0.010	-	-	-
trans-Chlordane	mg/kg dry wt	< 0.010	< 0.010	-	-	-
Total Chlordane [(cis+trans)* 100/42]	mg/kg dry wt	< 0.04	< 0.04	-	-	-
2,4'-DDD	mg/kg dry wt	< 0.010	< 0.010	-	-	-
4,4'-DDD	mg/kg dry wt	< 0.010	< 0.010	-	-	-
2,4'-DDE	mg/kg dry wt	< 0.010	< 0.010	-	-	-
4,4'-DDE	mg/kg dry wt	< 0.010	< 0.010	-	-	-
2,4'-DDT	mg/kg dry wt	< 0.010	< 0.010	-	-	-
4,4'-DDT	mg/kg dry wt	< 0.010	< 0.010	-	-	-
Dieldrin	mg/kg dry wt	< 0.010	< 0.010	-	-	-
Endosulfan I	mg/kg dry wt	< 0.010	< 0.010	-	-	-
Endosulfan II	mg/kg dry wt	< 0.010	< 0.010	-	-	-
Endosulfan sulphate	mg/kg dry wt	< 0.010	< 0.010	-	-	-
Endrin	mg/kg dry wt	< 0.010	< 0.010	-	-	-
Endrin aldehyde	mg/kg dry wt	< 0.010	< 0.010	-	-	-
Endrin ketone	mg/kg dry wt	< 0.010	< 0.010	-	-	-
Heptachlor	mg/kg dry wt	< 0.010	< 0.010	-	-	-
Heptachlor epoxide	mg/kg dry wt	< 0.010	< 0.010	-	-	-
Hexachlorobenzene	mg/kg dry wt	< 0.010	< 0.010	-	-	-
Methoxychlor	mg/kg dry wt	< 0.010	< 0.010	-	-	-

SUMMARY OF METHODS

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively clean matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis.

Sample Type: Soil			
Test	**Method Description**	**Default Detection Limit**	**Sample No**
Environmental Solids Sample Preparation	Air dried at 35°C and sieved, <2mm fraction. Used for sample preparation. May contain a residual moisture content of 2-5%.	-	1-7
Heavy metal screen level As,Cd,Cr,Cu,Ni,Pb,Zn	Dried sample, <2mm fraction. Nitric/Hydrochloric acid digestion, ICP-MS, screen level.	0.10 - 4 mg/kg dry wt	1-7
Organochlorine Pesticides Screening in Soil	Sonication extraction, SPE cleanup, dual column GC-ECD analysis (modified US EPA 8082).. Tested on dried sample	0.010 - 0.04 mg/kg dry wt	1-7
Total Recoverable digestion	Nitric / hydrochloric acid digestion. US EPA 200.2.	-	1-7

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Samples are held at the laboratory after reporting for a length of time depending on the preservation used and the stability of the analytes being tested. Once the storage period is completed the samples are discarded unless otherwise advised by the client.

Peter Robinson MSc (Hons), PhD, FNZIC
Client Services Manager - Environmental Division

Job No: 148 5293

Date Recv: 07-Oct-15 05:34

Received by: Jennifer Singlewood

3114852934

COMPOSITE SAMPLES		
Analysis	**ID**	**Date**
Heavy Metals Composite 1	AA#1(0.1)	6/10/2015
	AA#2(0.1)	
	AA#3(0.1)	
Heavy Metals Composite 2	AA#4(0.1)	
	AA#5(0.1)	
	AA#6(0.1)	
Heavy Metals Composite 3	AA#7(0.1)	
	AA#8(0.1)	
	AA#9(0.1)	
Heavy Metals Composite 4	AA#10(0.1)	
	AA#11(0.1)	
	AA#12(0.1)	
Heavy Metals Composite 5	AA#13(0.1)	
	AA#14(0.1)	
	AA#15(0.1)	
Heavy Metals Composite 6	AB#1(0.1)	
	AB#2(0.1)	
	AB#3(0.1)	
Heavy Metals Composite 7	AB#4(0.1)	
	AB#5(0.1)	
	AB#6(0.1)	
Heavy Metals Composite 8	AB#7(0.1)	
	AB#8(0.1)	
	AB#9(0.1)	

INDIVIDUAL SAMPLES		
Analysis	**ID**	**Date**
Heavy Metals and pH	AB-Battery	6/10/2015
Heavy Metals	ADUP#2	
Heavy Metals	ADUP#1	
OCP	AA#2(0.1)	
OCP	AA#5(0.1)	
OCP	AA#8(0.1)	
OCP	AA#11(0.1)	
OCP	AA#14(0.1)	
OCP	AB#2(0.1)	
OCP	AB#5(0.1)	
Heavy Metals	AA#4(0.1)	
Heavy Metals	AB#6(0.1)	
Multi residue pesticides	AB#7(0.1)	
Multi residue pesticides	AB#8(0.1)	
Multi residue pesticides	AB#9(0.1)	

Hill Laboratories
BETTER TESTING BETTER RESULTS

R J Hill Laboratories Limited
1 Clyde Street
Private Bag 3205
Hamilton 3240, New Zealand

Tel +64 7 858 2000
Fax +64 7 858 2001
Email mail@hill-labs.co.nz
Web www.hill-labs.co.nz

Job Information Summary

Client:	Davis Consulting Group Limited	**Lab No:**	1485293
Contact:	Fiona Rowley	**Date Registered:**	07-Oct-2015 12:56 pm
	C/- Davis Consulting Group Limited	**Priority:**	High
	PO Box 2450	**Quote No:**	
	Wakatipu	**Order No:**	
	QUEENSTOWN 9349	**Client Reference:**	The Hills Area A+B 15063
		Add. Client Ref:	
		Submitted By:	Fiona Rowley
		Charge To:	Davis Consulting Group Limited
		Target Date:	15-Oct-2015 4:30 pm

Samples

No	Sample Name	Sample Type	Containers	Tests Requested
1	AA#1 (0.1) 06-Oct-2015 10:45 am	Soil	GSoil300	Composite Environmental Solid Samples
2	AA#2 (0.1) 06-Oct-2015 10:50 am	Soil	GSoil300	Composite Environmental Solid Samples; Organochlorine Pesticides Screening in Soil
3	AA#3 (0.1) 06-Oct-2015 10:55 am	Soil	GSoil300	Composite Environmental Solid Samples
4	AA#4 (0.1) 06-Oct-2015 11:00 am	Soil	GSoil300	Composite Environmental Solid Samples; Heavy metal screen level As,Cd,Cr,Cu,Ni,Pb,Zn
5	AA#5 (0.1) 06-Oct-2015 11:05 am	Soil	GSoil300	Composite Environmental Solid Samples; Organochlorine Pesticides Screening in Soil
6	AA#6 (0.1) 06-Oct-2015 11:10 am	Soil	GSoil300	Composite Environmental Solid Samples
7	AA#7 (0.1) 06-Oct-2015 11:15 am	Soil	GSoil300	Composite Environmental Solid Samples
8	AA#8 (0.1) 06-Oct-2015 11:20 am	Soil	GSoil300	Composite Environmental Solid Samples; Organochlorine Pesticides Screening in Soil
9	AA#9 (0.1) 06-Oct-2015 11:25 am	Soil	GSoil300	Composite Environmental Solid Samples
10	AA#10 (0.1) 06-Oct-2015 11:30 am	Soil	GSoil300	Composite Environmental Solid Samples
11	AA#11 (0.1) 06-Oct-2015 11:35 am	Soil	GSoil300	Composite Environmental Solid Samples; Organochlorine Pesticides Screening in Soil
12	AA#12 (0.1) 06-Oct-2015 11:40 am	Soil	GSoil300	Composite Environmental Solid Samples
13	AA#13 (0.1) 06-Oct-2015 11:45 am	Soil	GSoil300	Composite Environmental Solid Samples
14	AA#14 (0.1) 06-Oct-2015 11:50 am	Soil	GSoil300	Composite Environmental Solid Samples; Organochlorine Pesticides Screening in Soil
15	AA#15 (0.1) 06-Oct-2015 11:55 am	Soil	GSoil300	Composite Environmental Solid Samples
16	A Dup #1 06-Oct-2015 11:01 am	Soil	GSoil300	Heavy metal screen level As,Cd,Cr,Cu,Ni,Pb,Zn
17	A Dup #2 06-Oct-2015 2:06 pm	Soil	GSoil300	Heavy metal screen level As,Cd,Cr,Cu,Ni,Pb,Zn
18	AB#1 (0.1) 06-Oct-2015 1:40 pm	Soil	GSoil300	Composite Environmental Solid Samples
19	AB#2 (0.1) 06-Oct-2015 1:45 pm	Soil	GSoil300	Composite Environmental Solid Samples; Organochlorine Pesticides Screening in Soil
20	AB#3 (0.1) 06-Oct-2015 1:50 pm	Soil	GSoil300	Composite Environmental Solid Samples
21	AB#4 (0.1) 06-Oct-2015 1:55 pm	Soil	GSoil300	Composite Environmental Solid Samples
22	AB#5 (0.1) 06-Oct-2015 2:00 pm	Soil	GSoil300	Composite Environmental Solid Samples; Organochlorine Pesticides Screening in Soil
23	AB#6 (0.1) 06-Oct-2015 2:05 pm	Soil	GSoil300	Composite Environmental Solid Samples; Heavy metal screen level As,Cd,Cr,Cu,Ni,Pb,Zn
24	AB#7 (0.1) 06-Oct-2015 2:15 pm	Soil	GSoil300	Composite Environmental Solid Samples; Multiresidue Pesticides in Soil samples by GCMS
25	AB#8 (0.1) 06-Oct-2015 2:20 pm	Soil	GSoil300	Composite Environmental Solid Samples; Multiresidue Pesticides in Soil samples by GCMS
26	AB#9 (0.1) 06-Oct-2015 2:25 pm	Soil	GSoil300	Composite Environmental Solid Samples; Multiresidue Pesticides in Soil samples by GCMS
27	AB-Battery 06-Oct-2015 2:10 pm	Soil	GSoil300	pH; Heavy metal screen level As,Cd,Cr,Cu,Ni,Pb,Zn
28	Composite of AA#1 (0.1) + AA#2 (0.1) + AA#3 (0.1)	Soil	GSoil300	Heavy metal screen level As,Cd,Cr,Cu,Ni,Pb,Zn

Samples

No	Sample Name	Sample Type	Containers	Tests Requested
29	Composite of AA#4 (0.1) + AA#5 (0.1) + AA#6 (0.1)	Soil	GSoil300	Heavy metal screen level As,Cd,Cr,Cu,Ni,Pb,Zn
30	Composite of AA#7 (0.1) + AA#8 (0.1) + AA#9 (0.1)	Soil	GSoil300	Heavy metal screen level As,Cd,Cr,Cu,Ni,Pb,Zn
31	Composite of AA#10 (0.1) + AA#11 (0.1) + AA#12 (0.1)	Soil	GSoil300	Heavy metal screen level As,Cd,Cr,Cu,Ni,Pb,Zn
32	Composite of AA#13 (0.1) + AA#14 (0.1) + AA#15 (0.1)	Soil	GSoil300	Heavy metal screen level As,Cd,Cr,Cu,Ni,Pb,Zn
33	Composite of AB#1 (0.1) + AB#2 (0.1) + AB#3 (0.1)	Soil	GSoil300	Heavy metal screen level As,Cd,Cr,Cu,Ni,Pb,Zn
34	Composte of AB#4 (0.1) + AB#5 (0.1) + AB#6 (0.1)	Soil	GSoil300	Heavy metal screen level As,Cd,Cr,Cu,Ni,Pb,Zn
35	Composite of AB#7 (0.1) + AB#8 (0.1) + AB#9 (0.1)	Soil	GSoil300	Heavy metal screen level As,Cd,Cr,Cu,Ni,Pb,Zn

SUMMARY OF METHODS

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively clean matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis.

Sample Type: Soil

Test	Method Description	Default Detection Limit	Sample No
Environmental Solids Sample Preparation	Air dried at 35°C and sieved, <2mm fraction. Used for sample preparation. May contain a residual moisture content of 2-5%.	-	4, 16-17, 23, 27-35
Soil Prep Dry & Sieve for Agriculture	Air dried at 35°C and sieved, <2mm fraction.	-	27
Heavy metal screen level As,Cd,Cr,Cu,Ni,Pb,Zn	Dried sample, <2mm fraction. Nitric/Hydrochloric acid digestion, ICP-MS, screen level.	0.10 - 4 mg/kg dry wt	4, 16-17, 23, 27-35
Multiresidue Pesticides in Soil samples by GCMS	Sonication extraction, GC-MS analysis. Tested on as received sample, then results corrected to a dry weight basis using the separate Dry Matter result.	0.003 - 0.06 mg/kg dry wt	24-26
Organochlorine Pesticides Screening in Soil	Sonication extraction, SPE cleanup, dual column GC-ECD analysis (modified US EPA 8082).. Tested on dried sample	0.010 - 0.04 mg/kg dry wt	2, 5, 8, 11, 14, 19, 22
Dry Matter (Env)	Dried at 103°C for 4-22hr (removes 3-5% more water than air dry) , gravimetry. US EPA 3550. (Free water removed before analysis).	0.10 g/100g as rcvd	24-26
Total Recoverable digestion	Nitric / hydrochloric acid digestion. US EPA 200.2.	-	4, 16-17, 23, 27-35
Composite Environmental Solid Samples	Individual sample fractions mixed together to form a composite fraction.	-	1-15, 18-26
pH	1:2 (v/v) soil : water slurry followed by potentiometric determination of pH.	0.1 pH Units	27

Document Set ID: 7096680
Version: 1, Version Date: 13/12/2021

GeoSolve Ref: 210331
17 November 2021

Concept Builders Queenstown Limited
info@conceptbuilders.co.nz
cc: Southern Planning

Attention: Martin Lawn

Geotechnical Assessment for Resource Consent
Proposed Building Platforms and Sub-division, Eastburn Road

Dear Martin,

1 Introduction

In accordance with our Agreement dated 13 May 2021 we have undertaken a resource consent geotechnical assessment for the proposed new building platform and subdivision at Eastburn Road, Crown Terrace.

To complete this assessment Geosolve have undertaken the following works:

- A review of information on the Geosolve database for the Preservation Lane sub-division area;
- A site inspection;
- An investigation comprising 3 x test pits and scala penetrometers, and;
- A desktop review of existing information.

The aim of this report is to review the geotechnical suitability of the proposed area for residential development and, if appropriate, provide further recommendations.

2 Proposed Development

It is proposed to sub-divide the existing Lot 20 DP 561087 into 2 lots identified as Lot 10 and Lot 20. A plan of the proposed subdivision completed by Aurum Survey Consultants (ASCL) is attached. A new building platform is located within Lot 10, as identified on the attached ASCL plan.

The site is located on the Crown Terrace approximately 7 km south east of Arrowtown, see Figure 2.1 below. The site is accessed from Eastburn Road and Preservation Lane.

Geosolve understands that no significant earthworks are proposed.

Figure 2.1. Site location

3 Topography and Geomorphology

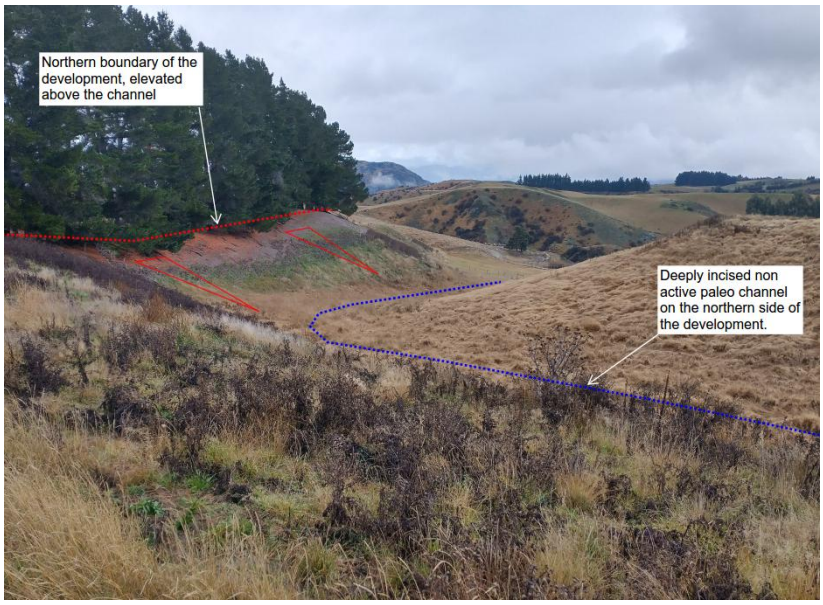
The proposed new lot and building platform are located on gently to moderately sloping south west facing farmland at the southern end of the Crown Terrace. Approximately 900 m to the north of the site the ground surface gradient increases and climbs steeply up to Crown Peak. Within the site boundary the surface is typically gently sloping. Agricultural equipment and silage were present in the area during the inspection, see Photograph 1 below.

Photograph 1. General view of the area during the site investigation, looking approximately east.

A series of incised drainage channels drain the steep mountainsides of Crown Peak upslope from the site. The channels continue downslope across the Crown Terrace, the

nearest active channel is approximately 300 m north of the site. The wider Crown Terrace area has remnants of paleo-channels and less active flow paths.

Lot 10 and the proposed building platform are located in an elevated position and are therefore naturally protected from overland flow from the higher ground to the north. A non-active paleo channel is present just beyond the northern boundary, see photograph 2 below. The channel disappears approximately 150 m upslope and is not connected to any active flow paths that drain the Crown Peak area.



Photograph 2. Looking approximately west along the northern/upslope boundary of the site where the incised paleo channel is present. The proposed building platform is located beyond the trees, elevated above the channel.

4 Natural Hazards

There are no geomorphological indications of ground instability in the building platform area or on the surrounding slopes. No upslope hazards, e.g. rock fall, debris flow or flooding where identified.

QLDC GIS hazard mapping shows the site is located in an area designated with respect to alluvial fan activity as “inactive, debris dominated”, see Figure 4.1 below.

A regional seismic risk is present, however this is not specific to the site.

No other natural hazards are identified.

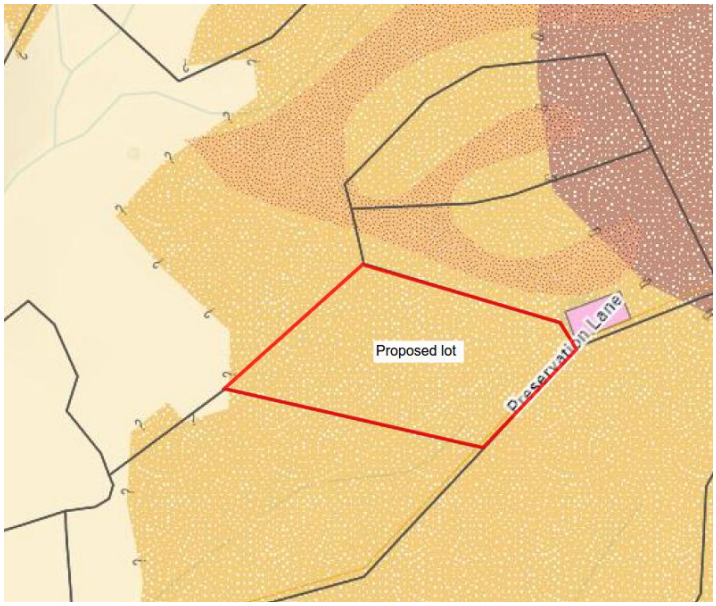


Figure 4.1. Excerpt from the QLDC GIS system showing the natural hazards and proposed Lot 10.

Based on our inspection of the site, and particularly the natural protection provided by the surrounding topography, the risk of alluvial fan activity affecting the development is considered very low and no specific requirements are considered necessary.

5 Subsurface Conditions

Stratigraphy

3 test pits were completed for this report to depths of 2.1 m. Fan materials comprising loose to medium dense sand and gravel deposits with varying fractions of silt are present under the site area. These materials were also exposed on several locations around the immediate surrounding area, indicating a thickness of several metres.

Full descriptions are provided in the test pit logs attached and the test pit locations are shown on Figure 5.1 below.

Groundwater

The proposed development is located in an elevated position above the valley floor and nearby water courses. The regional groundwater table is expected to be significantly below the site and any proposed earthworks.

The 3 test pits completed in the development area were all recorded as dry, no perched seepages were observed in the test pits or on the surrounding slopes.

Seismic

Active fault traces were not observed at the site or in the immediate vicinity. The closest major active fault is the Nevis-Cardrona Fault system, approximately 1.5 km to the south east. The Nevis-Cardrona Fault has a calculated recurrence interval of 5,500 years and does not govern the seismic risk for the property. A significant seismic risk exists in this region from rupture of the Alpine Fault, located 80 km northwest from Queenstown along

the West Coast of the South Island. There is a high probability that an earthquake with an expected magnitude of over M_W 8 will occur along the Alpine Fault in the next 50 years.

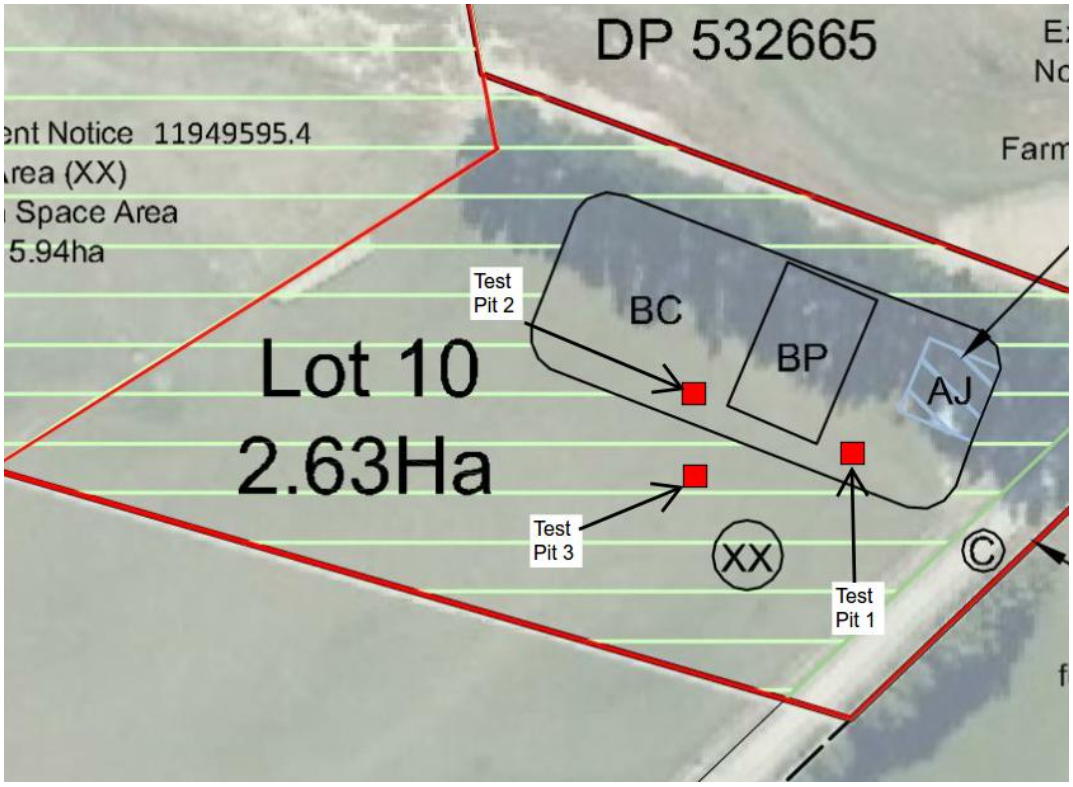


Figure 5.1. Test pits, and proposed Lot 10 with the building platform shown.

6 Suitability of the Site for Residential Development

The site is considered suitable for residential development.

Fan materials may provide "Good Ground" as per NZS3604 with respect to bearing capacity, however ground strengths will be variable.

Specific engineering design (SED) will therefore be required for foundation design.

Typical shallow foundations, strip, pad, waffle raft and timber pole will be suitable provided they are designed accordingly for the local bearing conditions.

To the north of the site the ground falls into the channel described above at approximately 15-20°. No significant impact from this slope is expected for the proposed building areas.

No specific assessment or engineering works are considered necessary with respect to natural hazards.

7 Summary

No significant geotechnical issues have been identified that would preclude the site from residential development and the proposal is considered acceptable from a geotechnical perspective. Specific engineering assessment will be required to ensure foundation

designs are completed appropriately. Final geotechnical requirements will be confirmed in the Geotechnical Completion Report as per QLDC guidelines.

8 Applicability

This report has been prepared for the sole use of our client, Concept Builders Queenstown Limited, with respect to the particular brief and on the terms and conditions agreed with our client. It may not be used or relied on (in whole or part) by anyone else, or for any other purpose or in any other contexts, without our prior review and written agreement.

Yours faithfully,

Paul Faulkner
Senior Engineering Geologist
GeoSolve Limited

Attachments: Site Plan – Aurum Survey Consultants.
Test pit logs TP1-TP3

N

Lot 33 DP 561087
(refer RM200240)

Lot 20 DP 561087

Lot 27
DP 417527

Eastburn Road
(Legal Road)

Vegetation Enhancement Area

BA

Existing Consent Notice 11949595.4
Area (BA) 0.67ha

Lot 20
40.64Ha

Existing Consent Notice 11949595.4
Area (BB)
Ecological Gully Area
8.05ha

Lot 6
DP 532665

Existing ROW & Services

A

BB

XX

Lot 20 DP 561087

Lot 7
DP 532665

Existing Consent
Notice 11949595.4
Area (AJ)
Farm Building Platform
400m²

Existing ROW & Services Easements (A, B, C, L)

B

Existing Consent Notice 11949595.4
Area (XX)
Open Space Area
5.94ha

BC

BP

AJ

Existing ROW & Services

L

Lot 10
2.63Ha

XX

C

Existing ROW
& Service Area (C)
for existing Lots 1 to 5

Lot 4
DP 532665

Lot 5
DP 550017

Lot 8
DP 532665

Lot 19
DP 532665

Lot 1
DP 532665

Note:

- Easements may be needed for services
- Final areas and dimensions are subject to survey and final LINZ approval.
- Existing easements and consent notices will be brought forward from the parent title as they relate to each new parcel.

Lots 10 and 20 being a subdivision of
Lot 20 DP 561087
Preservation Lane, Crown Terrace

DATE: 26 Oct 2021	Scale 1:4000 Original Plan A3	DRAWING & ISSUE No. 3720-11R-1C
BY: B McLeod		

AURUM SURVEY
PO Box 2493
Wakatipu 9349
Ph 03 442 3466
Fax 03 442 3469
Email admin@ascl.co.nz

AFFECTED PERSON'S APPROVAL

FORM 8A

QUEENSTOWN LAKES DISTRICT COUNCIL

Resource Management Act 1991 Section 95

RESOURCE CONSENT APPLICANT'S NAME AND/OR RM

Martin & Suzanne Lawn

AFFECTED PERSON'S DETAILS

I/We Duane Ingley & Mitchell Mackersy Trustees (2020) Limited

Are the owners/occupiers of

Lot 5 DP 550017

DETAILS OF PROPOSAL

I/We hereby give written approval for the proposal to:

To subdivide Lot 20 DP 561087 into two allotments, with proposed Lot 10 providing a residential building platform.

at the following subject site(s):

108 Eastburn Road, Crown Terrace.

☑ PLEASE TICK I/We understand that by signing this form Council, when considering this application, will not consider any effects of the proposal upon me/us.

☑ PLEASE TICK I/We understand that if the consent authority determines the activity is a deemed permitted boundary activity under section 87BA of the Act, written approval cannot be withdrawn if this process is followed instead.

WHAT INFORMATION/PLANS HAVE YOU SIGHTED

☑ PLEASE TICK I/We have sighted and initialled ALL plans dated and approve them.

26/10/21, 6/9/21, 30/9/21

APPROVAL OF AFFECTED PERSON(S)

The written consent of all owners / occupiers who are affected. If the site that is affected is jointly owned, the written consent of all co-owners (names detailed on the title for the site) are required.

A

Name (PRINT)
Duane Ingley

Contact Phone / Email address
ingley.plumbing@xtra.co.nz

Signature

Date 24/11/2021

B

Name (PRINT)
Mitchell Mackersy Trustees (2020) Limited

Contact Phone / Email address
alastair.holland@duncancotterill.com

Signature
A. R. HOLLAND
DIRECTOR

Date 24/11/2021

C

Name (PRINT)

Contact Phone / Email address

Signature

Date

D

Name (PRINT)

Contact Phone / Email address

Signature

Date

Note to person signing written approval

Conditional written approvals cannot be accepted.

There is no obligation to sign this form, and no reasons need to be given.

If this form is not signed, the application may be notified with an opportunity for submissions.

If signing on behalf of a trust or company, please provide additional written evidence that you have signing authority.

Note:

- Area "BP" to be subject to Consent Notice for building platform.
- Easements may be needed for services
- Final areas and dimensions are subject to survey and final LINZ approval.
- Existing easements and consent notices will be brought forward from the parent title as they relate to each new parcel.

Diagram of Proposed Lot 10

DATE: 10 May 2022	Scale 1:1000 Original Plan A3	DRAWING & ISSUE No. 3720-11R-2C
BY: B McLeod		

AURUM SURVEY
PO Box 2493
Wakatipu 9349
Ph 03 442 3466
Fax 03 442 3469
Email admin@ascl.co.nz