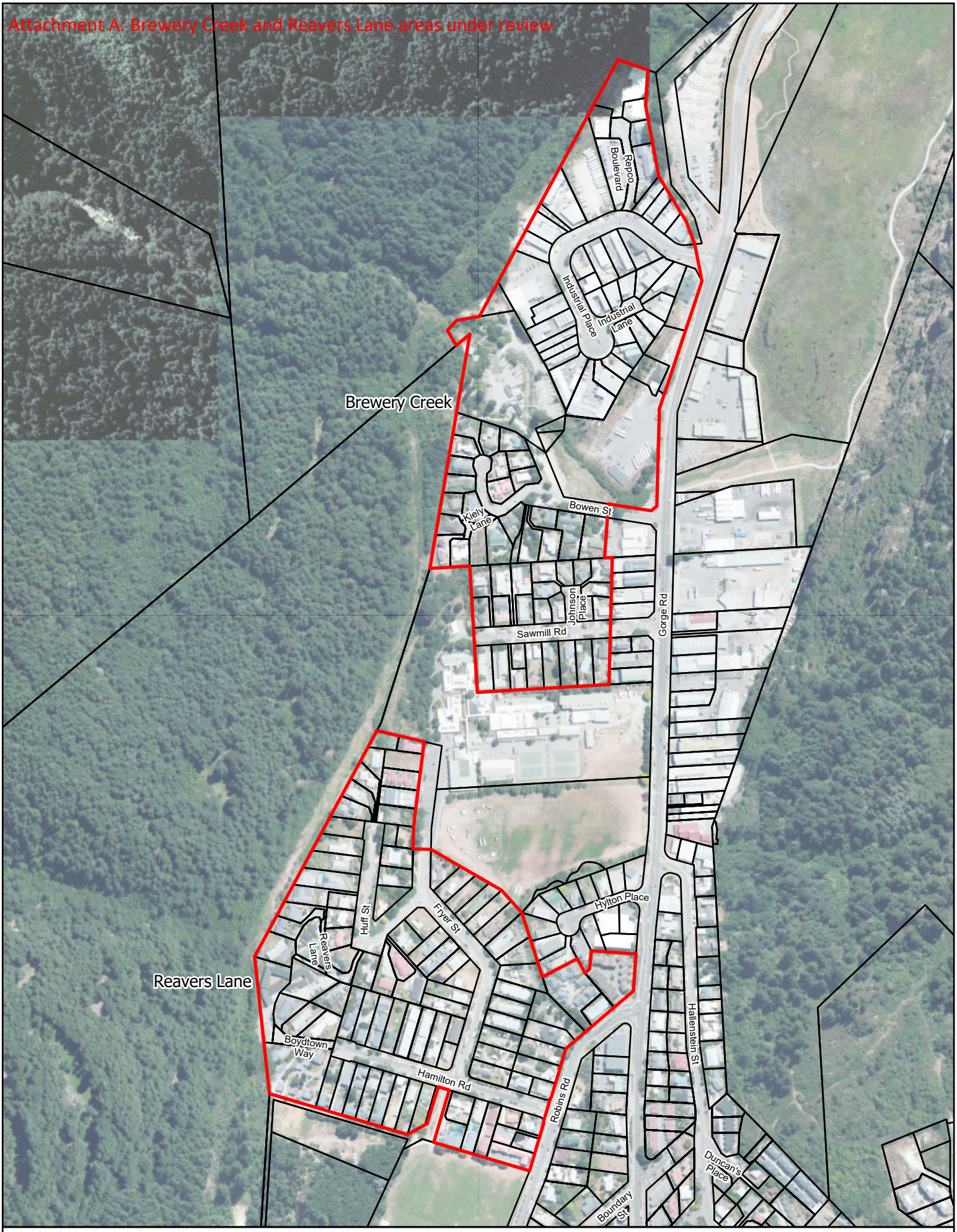
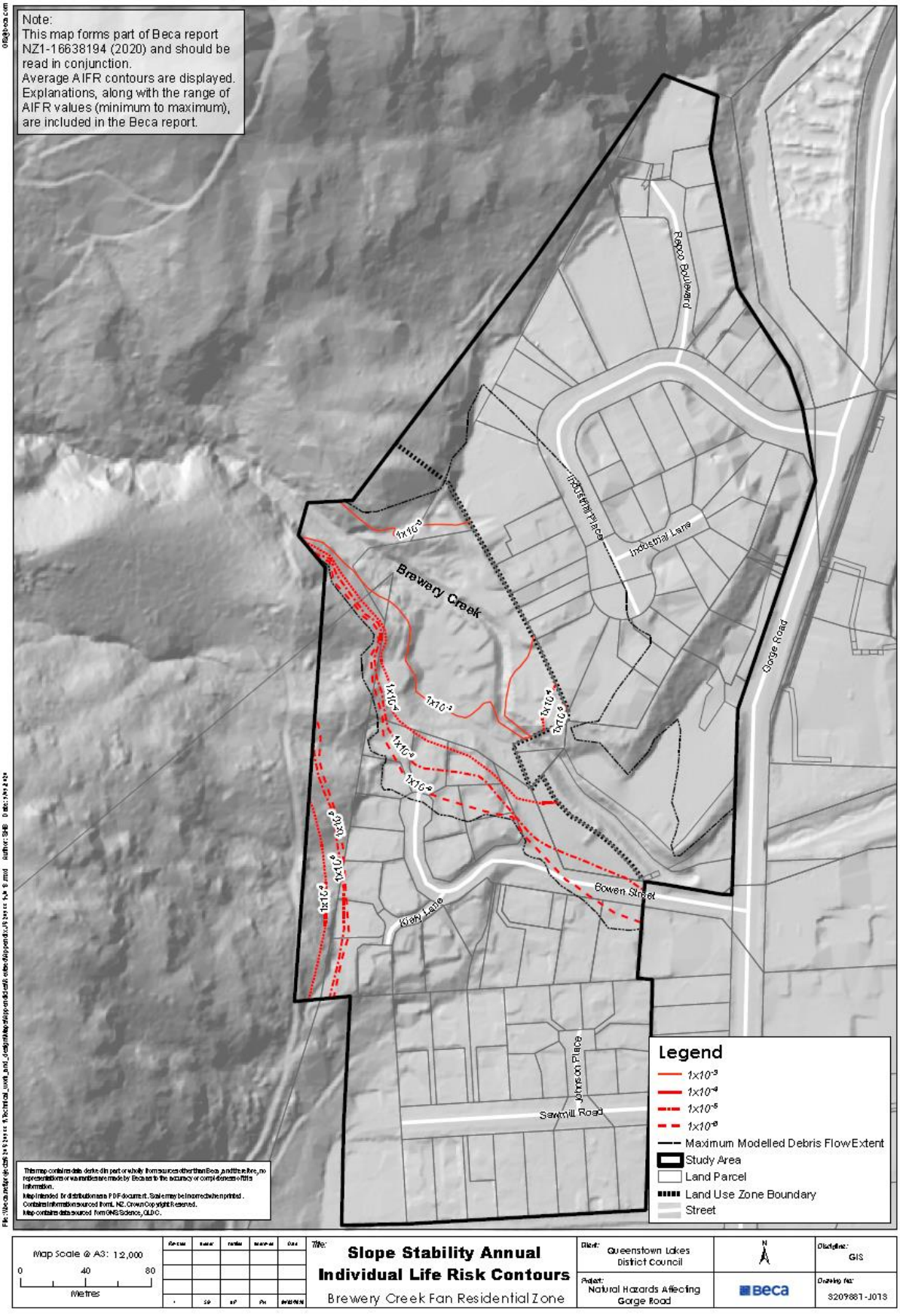
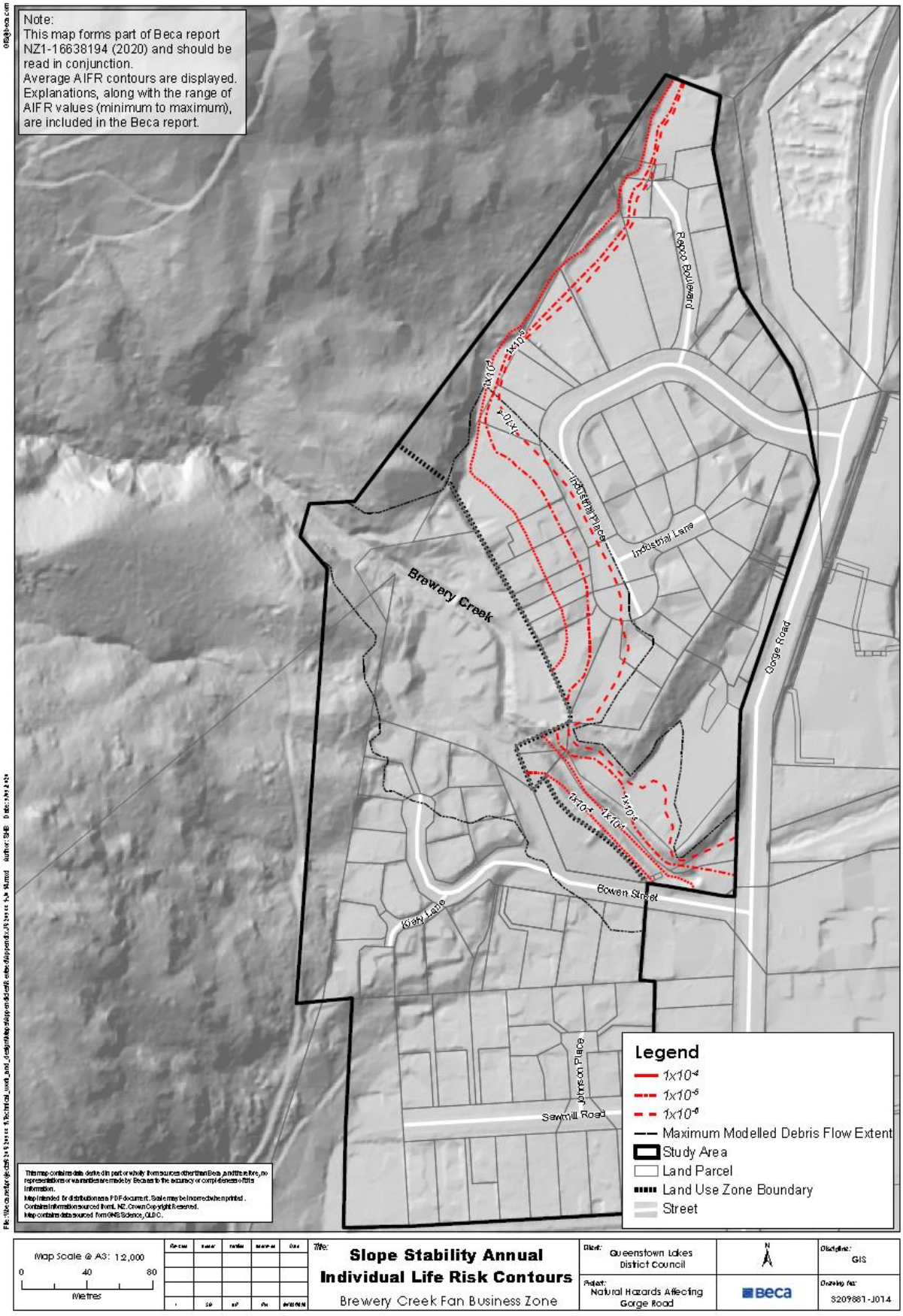
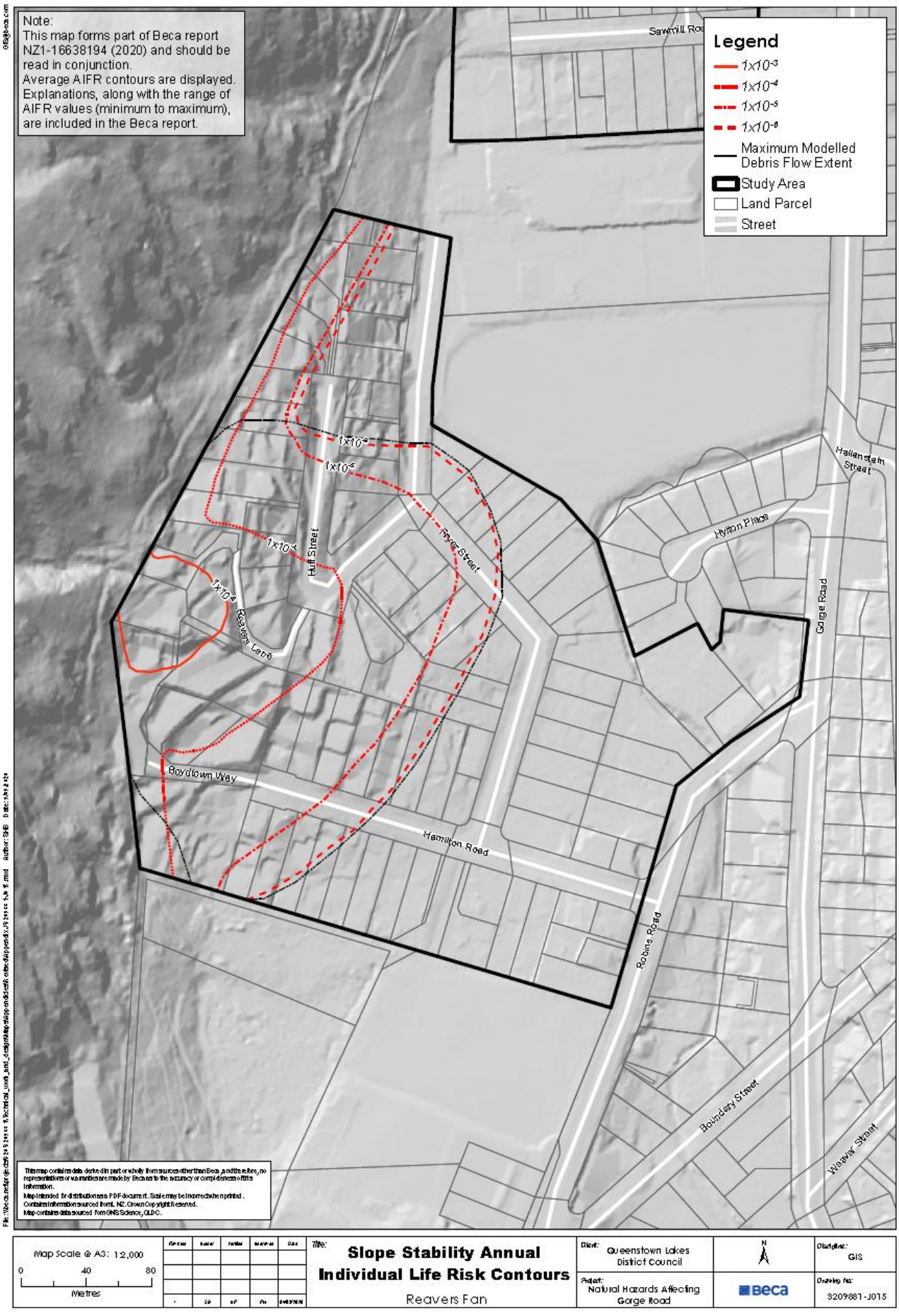

Attachment A: Brewery Creek and Reavers Lane areas under review
Brewery Creek
Reavers Lane
Repco Boulevard
Industrial Place
Industrial Lane
Bowen St
Kiely Lane
Johnson Place
Sawmill Rd
Gorge Rd
Hylton Place
Huff St
Fryer St
Reavers Lane
Boydtown Way
Hamilton Rd
Robins Rd
Hallenstein St
Duncan's Place
Boundary St
Brewery Creek and Reavers Lane
Areas Under Review
Legend
Area Under Review
N
0 25 50 100 Meters

Attachment B: Brewery Creek & Reevers Lane annual individual fatality risk contour maps




Note:
This map forms part of Beca report NZ1-16638194 (2020) and should be read in conjunction.
Average AIFR contours are displayed. Explanations, along with the range of AIFR values (minimum to maximum), are included in the Beca report.
Rapco Boulevard
Industrial Place
Industrial Lane
Brewery Creek
Gorge Road
Bowen Street
Kirby Lane
Johnson Place
Sawmill Road
1x10-4
1x10-5
1x10-6
Legend
1x10-4
1x10-5
1x10-6
Maximum Modelled Debris Flow Extent
Study Area
Land Parcel
Land Use Zone Boundary
Street
Map Scale @ A3: 1:2,000
0
40
80
Metres
Slope Stability Annual Individual Life Risk Contours
Brewery Creek Fan Business Zone
Client: Queenstown Lakes District Council
Project: Natural Hazards Affecting Gorge Road
beca
Discipline: GIS
3209881-J014


Note:
This map forms part of Beca report NZ1-16638194 (2020) and should be read in conjunction.
Average AIFR contours are displayed. Explanations, along with the range of AIFR values (minimum to maximum), are included in the Beca report.
Legend
1x10-3
1x10-4
1x10-5
1x10-6
Maximum Modelled Debris Flow Extent
Study Area
Land Parcel
Street
Sawmill Road
Hallenstein Street
Hylton Place
Gorge Road
Huff Street
Fryer Street
Reavers Lane
Boydtown Way
Hamilton Road
Robins Road
Boundary Street
Weaver Street
Map Scale @ A3: 1:2,000
0
40
80
Metres
Slope Stability Annual Individual Life Risk Contours
Reavers Fan
Client: Queenstown Lakes District Council
Project: Natural Hazards Affecting Gorge Road
Beca
Discipline: GIS
Drawing No: 5209881-J015

QLDC: Public engagement on risk for Brewery Creek and Reavers Lane

Summary of consultation process and findings – March 2022

MJ Kilvington – ISREF – Independent Research, Evaluation & Facilitation

Disclaimer: This document contains information to support the Queenstown Lakes District Council (QLDC) deliberations on the management of the elevated risk in Brewery Creek and Reavers Lane. This information is not advice and should not be treated as such.

Table of Contents

Executive Summary

This document reports on the consultation and engagement activity undertaken in support of the Brewery Creek and Reavers Lane Natural Hazard review in 2021. The purpose of this consultation was to share information about the hazard and risk, let people know about the costs and benefits of management response options, and seek feedback on views and preferences from those affected by the hazard and management options. The report outlines the steps taken to hear from those affected by the review (section 1) and highlights common themes in the collated feedback (section 2). The report also comments on how the consultation and engagement activity contributes to the robustness of the decision making for risk-based planning in the Gorge Road area (section 3).

Introduction

The public engagement took place over November and December 2021. It offered a range of face-to-face opportunities to meet with QLDC staff and technical risk experts, including individual meetings for those property owners not currently resident in the area. The main events were:

- '**Hear about the Hazards'** drop-in sessions: staged information sharing events, with poster displays, and opportunities to meet with technical experts
- '**Risk Response Discussions**': small group meetings held with those who were affected by similar elevated levels of risk (high, moderate and low). At these meetings the four possible responses to the hazard prepared through the review (*status quo, engineering, manage* and *reduce*) were discussed in more detail and feedback sought on residents' preferences. QLDC offered individual interviews for those unable to make these meetings.

The overall engagement approach had several other aspects running concurrent to the main events which sought to increase the community reach of the process: A summary brochure outlining the technical information and the four main risk management options; the QLDC website "Let's Talk"; and QLDC met with several 'community connectors' to help contact harder to reach parts of the community.

Each component of the consultation approach was designed to support and feed into other parts, building participant understanding and ability to meaningfully take part in discussions weighing up the costs and benefits of managing the hazard risk.

Key messages for QLDC

Views on risk and expectations of response

There is considerable concern about the Gorge Road hazards and the implications for personal safety, and long-term viability of the area, amongst those who participated in the consultation and engagement activities. This includes the concern that, since the hazard has been identified, inaction (including the *status quo* option) would be detrimental to property values and create uncertainty, making it hard for those who own property in the hazard area to sell.

Almost no one regarded the risk, (whether in the low, moderate, or high-risk areas) as acceptable – i.e., not requiring mitigation. However, there was also no single tolerance for risk. Levels of concern about the risk vary as much within risk zones as between risk zones and are based on personal factors (financial commitment, resilience, experience of hazard events and risk decisions) as well as

risk exposure. Those who showed greatest concern (i.e., least tolerance) were generally property owners who lived in their own homes.

Different groups (e.g., homeowners, investment property owners, accommodation businesses, and corporate businesses) have differing concerns about how the hazard affects them and the impacts of any management response.

Views on the risk and on the options diverged most amongst the highest risk group. This is a small group and those who took part had varying circumstances.

Views on preferred response

There is general acceptance that QLDC will need to act to manage the risk across all risk levels – even low risk areas. However, participants were also keen that the response to the risk be proportional. Since people are not generally focussing on the implications of being involved in a hazard event long term (i.e., the impacts of recovery) they more acutely feel the potential negative costs of addressing the hazard in the present.

Living with the risk by adjusting the risk profile (e.g., through restricting further development) is not attractive to people. People want tangible evidence that the chosen response will address the hazard for those who are here right now– either through engineering or even by removing people from harm's way.

None of the four options presented to people were universally positively viewed for both satisfactory management of the hazard risk and for impacts of implementation (financial impact, ability of option to maintain opportunities and whether it provides clarity and certainty for the future).

How the four options were regarded:

	Addresses concerns over risk for now and in the future			Addresses concerns over impacts of managing the risk								
				Financial impact			Maintains opportunities			Provides clarity and certainty		
Status Quo												
Engineering						unsure						
Manage							unsure					
Reduce		unsure										
Risk level	**High**	**Med**	**Low**	**High**	**Med**	**Low**	**High**	**Med**	**Low**	**High**	**Med**	**Low**

Strong negative: Complete or predominant view is "does not address concerns"	Strong positive: Complete or predominant view is "Addresses concerns well"	Mixed views
Soft negative: General trend is does not address concerns or only partially.	Soft positive: General trend is does address concerns or only partially	Uncertainty plus mixed views

Status quo was the least preferred option for addressing concerns over risk. Most participants regarded this response as being (1) unjustifiable in high-risk areas (2) creating a stigma for property with hazard risk on the LIM.

Engineering was most preferred and specifically Rockfall fencing was the lead preferred option. Rockfall fencing will clearly benefit some people and those who are aware of this are very keen on it. Some others appear confused or hopeful that rockfall fencing will mitigate the overall risk to a level that will be acceptable/or are still hopeful that other engineering will be possible to reduce the debris flow risk sufficiently. Potential costs of engineering and how these works will be paid for was the implementation issue people were most concerned about.

The *Reduce* option is regarded as a last resort. It needed more clarity on several factors (e.g., how compensation would be negotiated, and the decision process). Reduce evoked strong negative views in some people but others wanted it to be further developed to provide a clearer option. No one chose it as their preferred option although owners of some of the larger businesses were pragmatic about it.

Manage was recognised by some as having an overall risk reduction potential for future risk but was regarded less positively overall for addressing concerns over the hazard risk because it did nothing tangible for those currently living and owning property in the area. *Manage* had the fewest positive responses overall, as well as the most diversity of views and 'unsure' answers regarding implementation concerns. This is an option that appears to benefit no one currently living in the area.

Views on the consultation and public engagement process

The risk engagement achieved positive interactions and high-quality feedback from concerned and affected people within the risk area. A large amount of information was shared in a staged way to allow people to develop their understanding and form an opinion. People made comments such as "*I am glad I came*" and expressed the view that this was a hard decision.

Participants at the 'Hear about the Hazards' sessions came from across both the Brewery Creek and Reavers study area, and there were participants from across the high, moderate and low risk areas who attended the "Risk Response Discussion" meetings. These people were predominantly owners of property in the affected areas. Those who took part expressed value in the area for a range of reasons – particularly linked to the lack of similar residential options within Queenstown.

Tenants of rental property and short-term visitors to the area were hard to connect with through the consultation and engagement process and their views cannot be accurately represented here. There is a growing field of research on the vulnerabilities of transient groups including tourists, and this can be used to assist the planning response development.

Businesses from within the Brewery Creek Business Zone/Industrial Place area also had limited participation. Some of the concerns and views of businesses were gathered from the corporate business representatives and those involved in accommodation businesses, who did participate.

There is little appetite for further consultation without significant progress towards a decision. Uncertainty, and protracted process is a source of stress for people in the affected community.

Other matters

During the consultation and engagement activities people raised several issues that they had questions or concerns about:

- How the hazard risk label on the LIM impacts property value, re-sale, and insurance

- How the different management options will impact property value, re-sale, and insurance – including in adjacent areas.
- How does land management (forests and culvert maintenance) effect the hazard risk – can this be part of the risk mitigation options?
- How will the "*lines be drawn*" and what are the implications for those with split risk levels on their properties?
- How might land vacated for the Reduce option be used? Could it be allocated to provide some social benefit for the area?

1. Introduction

1.1. This document reports on the consultation and engagement activity undertaken in support of the Brewery Creek and Reavers Lane Natural Hazard review in 2021. The purpose of this consultation was to share information about the hazard and risk, let people know about the costs and benefits of management response options, and seek feedback on views and preferences from those affected by the hazard and management options. The report outlines the steps taken to hear from those affected by the review and highlights common themes in the collated feedback. The report also comments on the how the consultation and engagement activity contributes to the robustness of the decision making for risk-based planning in the Gorge Road area.

1.2. The report does not comment on an organised group that QLDC has been engaging with directly and which is ongoing. This group has sought independent expert geotechnical advice which provides alternative views on the extent of natural hazard risk across Reavers Lane. This engagement will be reported on separately.

Background

1.3. In 2015, as part of the QLDC district plan review, QLDC identified the possible need for changes to zoning for the Brewery Creek and Reavers Lane areas. These are areas are currently zoned high density residential and business. They face a high level of development pressure. The Brewery Creek and Reavers Lane areas are unique as they both form the surface of two alluvial fans - cone shaped landforms made of sediment which has made its way to the valley floor from hill country streams above. This means the land in the Brewery Creek and Reavers Lane areas is prone to natural hazards such as rockfalls, debris flows, liquefaction, and flooding. Further work to assess the nature of the hazard and its potential impacts was undertaken. This made it clear to QLDC that land use decisions for the future of this area will need to consider the comparatively greater risk faced by parts of the Brewery Creek and Reavers Lane areas.

1.4. In 2019, there was initial public engagement with the affected community to outline the current understanding of the risk and to provide QLDC with some guidance on overall risk tolerance. In 2020 and 2021 further technical work was completed on the natural hazard risk, and the costs and benefits and effectiveness of possible options to manage the risk the [Appendix 1 – list of technical reports]. The four basic management options are set out in the Table 1.

Table 1: Summary of risk management options

<table>
<tr><th>Increasing Risk</th><th>Option A - Status quo</th><th>Option B Engineering</th><th>Option C Manage</th><th>Option D Reduce</th></tr>
<tr><td rowspan="4">  </td><td rowspan="3">Risk assessed on a case-by-case basis</td><td rowspan="3">Construct mitigation structures and enable development</td><td>Same built form – no change/increase, same or less vulnerable use</td><td rowspan="2">Remove all built form and uses</td></tr>
<tr><td>Small/limited increases in built form, same or less vulnerable use</td></tr>
<tr><td>Allow development and vulnerable uses within tolerable limits</td><td>No further development, same or less vulnerable use</td></tr>
<tr><td colspan="4">No intervention</td></tr>
</table>

1.5. In 2021 further public engagement was deemed necessary based on the new information that had been commissioned regarding the nature and scale of the risk and the costs and benefits of the different management options. The purpose of this public engagement was to:

- Share the new information about the hazard and the risk
- Let people know about the management and response options – and their costs and benefits
- Seek feedback on the views/preferences of those affected in different ways by the hazard and the management options
- Inform people about next steps

Dr Margaret Kilvington, [ISREF- Independent Social Research, Evaluation & Facilitation] was contracted to work with QLDC staff on the consultation and engagement project.

Design of consultation and engagement approach

1.6. The consultation and engagement approach were developed in discussion with the Brewery Creek/Reavers Lane project team. It was designed to meet criteria for robust public engagement on risk as well as QLDC's own guiding principles for public consultation. Robust public engagement on risk has three components: valid process, valid interpretation of feedback, and valid and transparent integration into a decision[1] [see section 3 for assessment of consultation robustness].

1.7. The unique characteristics of the affected community were also important in shaping the overall approach. The Socio-Economic assessment provided for QLDC in July 2021 included the following information:

[1] Kilvington & Saunders 2019

- *The area contains 210 businesses that employ 1,330 people,*
- *There are much lower shares of children and elderly people, households are transient in nature, likely to be occupied by seasonal, tourism and hospitality workers,*
- *A high proportion of the dwellings are rented,*
- *The population is more ethnically diverse than other parts of the district,*
- *Household incomes are lower than in other parts of the district, the community is more likely to be physically capable of responding to a natural hazard risk, but less likely to be able to cope with the financial outcomes, and*
- *The community is likely to be more mobile and less connected to the local area*

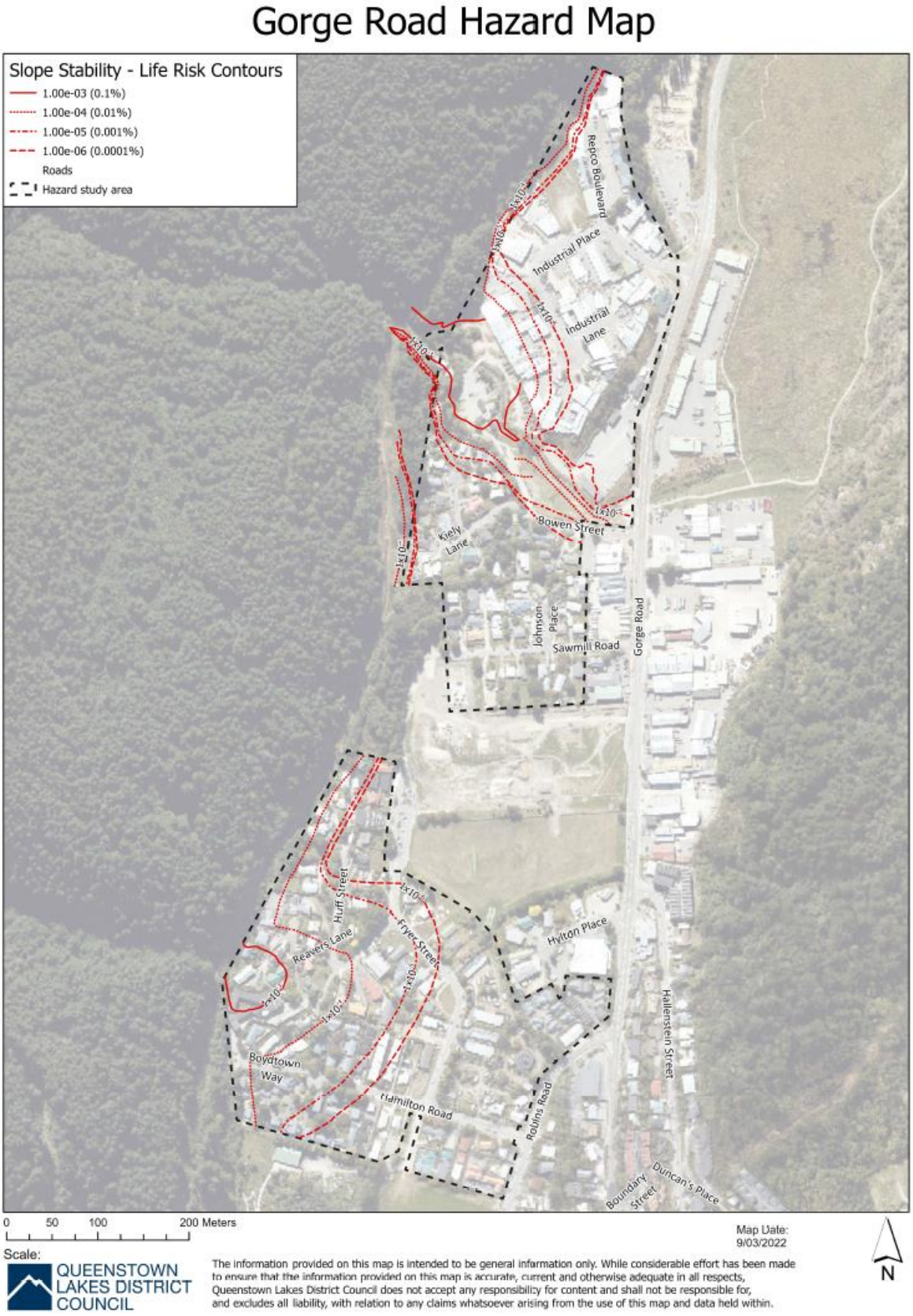
1.8. The map of the assessment area (p.10) shows the different levels of risk across the Brewery Creek and Reavers Lane fans. Parts of the assessment area are impacted by different types and scale of hazard (rock fall and debris flow) (Figure 1 Slope Stability – Life Risk Contours).

1.9. An important part of the consultation design was that those affected by different levels of risk were given a chance to review the options and express their preferences in meetings with others who faced similar situations. The Table 2 below outlines how properties were grouped according to levels of risk.

Table 2: Groups for Risk Response Discussions

Zone		Group	Description	Details
Residential Zone	High Risk	A	• Properties where all land is at levels of risk above $1x10^{-4}$ • AGS tolerability guidelines: Risk levels above guidelines for existing and new development • This group is primarily affected by debris flow	(15 properties) 14 from Reavers and 1 from Brewery.
	Moderate Risk	B	• Properties where some land is subject to levels of risk above $1x10^{-4}$ and some land is below, but above $1x10^{-5}$ (i.e., the $1x10^{-4}$ line goes through the property) • AGS tolerability guidelines: Some land exceeds guidelines for existing and new development • This group is affected by both rock fall and debris flow	(15 properties) 12 from Reavers and 3 from Brewery
	Low Risk	C	• Properties with all land at levels of risk below $1x10^{-4}$ and above $1x10^{-6}$ • AGS tolerability guidelines: No land exceeds guidelines for existing development, some exceed guidelines for new development • This group is primarily affected by rare debris flow events and a couple of properties only affected by rockfall.	(44 properties) 35 from Reavers and 9 from Brewery
Business Zone	Mixed Risk	D	• Properties with multiple levels of risk	18 properties
Outside risk area		F	• No targeted discussion but opportunity for written feedback	

Figure 1 Slope Stability – Life Risk Contours



Summary of consultation and engagement activity

1.10. The public engagement took place over November and December 2021. It offered a range of face-to-face opportunities to meet with QLDC staff and technical experts, including online meetings for those property owners not able to attend. The main events were:

- '**Hear about the Hazards'** drop-in sessions: staged information sharing events, with poster displays, where people could meet with QLDC staff and the technical experts who had been commissioned by Council to assess the natural hazard risk, and the costs and benefits of the different management options; Otago Regional Council (ORC) hazard management, and Civil Defence Emergency Management staff also participated.
- '**Risk Response Discussions**': small group meetings held with those who were affected by similar elevated levels of risk (high, moderate, low, see Table 2 above). At these meetings the possible responses to the hazard were discussed in more detail with QLDC staff, and feedback sought on residents' preferences.

1.11. The overall engagement approach had several other aspects running concurrently to the main events which sought to increase the community reach of the process:

- A summary brochure outlining the technical information and the four risk management options was widely distributed through email, post, and letter box drops (addressed to residents and landowners).
- The QLDC website "Let's Talk" was used as a communications portal for the project, hosting the full technical reports, as well as short summary film clips, and a list of frequently asked questions. There was a semi-structured feedback form online for anyone who wished to make a submission in this form.
- The "Let's Talk" page also offered members of the community an opportunity to directly submit questions to QLDC staff, and an additional 'submission form' type feedback opportunity was offered following the close of the risk response discussions.
- QLDC met with several 'community connectors' – those whose work or role in the community could offer valuable insights into different sectors of Queenstown communities to help broaden the reach and effectiveness of the engagement.
- Individual meetings were offered to those who could not attend the organised consultation group meetings (December 2021).
- QLDC staff also advised members of the community that they would be available to talk and/or correspond with those who attended the 'Hear about the Hazards' and/or the 'Risk Response Discussions'. This further correspondence was included as contributions to the public feedback.

1.12. Each component of the consultation approach was designed to support and feed-into other parts. For instance, the community connectors advised on how best to communicate with people to encourage participation in the 'Hear about the Hazard' drop-in sessions. These in turn prepared people for the targeted consultation 'Risk Reduction Discussion' meetings where the risk management options were discussed in more detail. A large amount of information was shared in a staged way to allow people to develop their understanding and form an opinion.

Attendance and participation

1.13. The 'Hear about the Hazards' drop-in sessions received over 50 visitors over the two days. People came from across the assessment area and were predominantly homeowners, and owners of rental properties. [The attached participant map (Figure 2) collected information on those who were attending]. Some participants came from outside the elevated risk areas, and a small number of those who rented property or worked in the area also attended.

1.14. Participants spent a long time at the drop-in sessions, talking with QLDC and ORC staff, and technical experts. Project team members who participated were satisfied that the 'Hear about the Hazards' event had exceeded expectations for delivering complicated information in an accessible way.

1.15. Feedback from participants at the 'Hear about the Hazards' was collected through notes from the project team and the technical advisors, and through views shared at the "What matters to you?" station.

1.16. The 'Risk Response Discussions' were held two weeks after the 'Hear about the Hazards' drop-ins to allow time to prepare, circulate invitations and advise participants of meeting times that best matched their situation. Following the meetings three individual meetings were held with those who could not attend the group meetings. [See Table 3 below of participation in 'Risk Response Discussions'].

Table 3: Participation in the risk response discussions		
High Risk	Group A + individual meetings	6 participants
Moderate Risk	Group B	5 participants
Low Risk	Group C	5 participants
Businesses [mixed risk]	Group D + individual meetings	5 participants

1.17. There was good and open discussion and questioning at the risk-response meetings. Notes were taken of all the meetings and participants completed a questionnaire afterwards [see Appendix 2]. Those at the group meetings also took part in a voting exercise at the end of the meeting. Participants were asked to allocate seven tokens, according to their preference for five risk response options (*status quo, rock fall fencing, other engineering works, manage, reduce*) in response to the question: "*What do you think QLDC should investigate further?".*

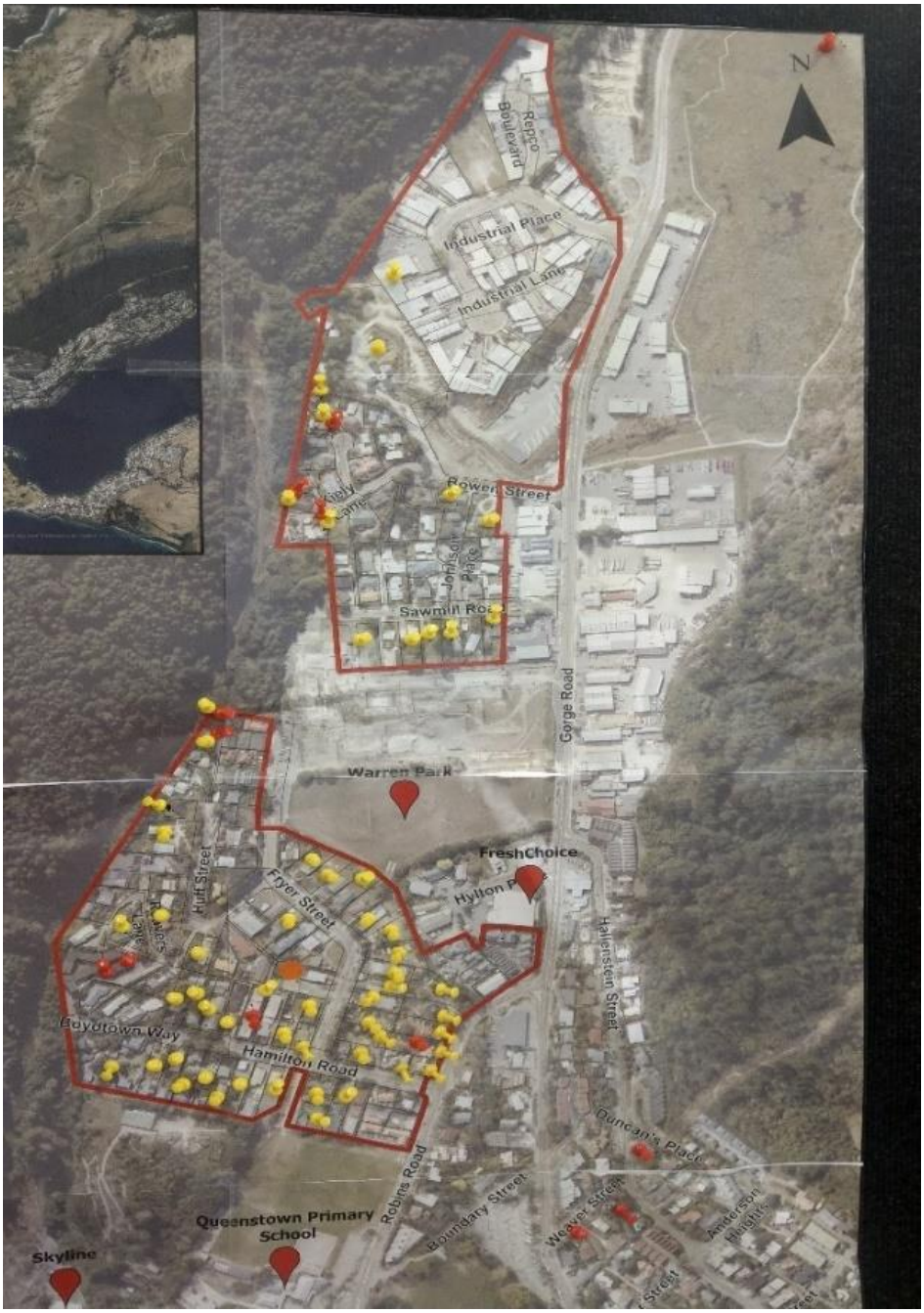


Figure 2: Attendance at the 'Hear about the Hazards' drop-in sessions

2. Feedback from the consultation

2.1. All sources of information provided by participants at the 'Hear about the Hazards' and the 'Risk Response Discussions', the individual meetings and written correspondence have been used to build a picture of the common and divergent public views on the natural hazard risk and the options presented by QLDC to address the risk. All this information, together with notes from meetings with 'community connectors' has been assessed and used to respond to several guiding questions provided by QLDC.

Views on Risk

Summary:

2.2. There is broad acceptance of the existence of elevated risk in the Brewery Creek and Reavers Lane areas and an expectation and concern that now, having been identified, something needs be done to address this – i.e., the risk is not regarded as able to be tolerated without mitigation. In some cases, this is because of the level of concern about the hazard impacts in other cases this is because of the perceived impact on property values and insurance, of being within a known hazard area.

2.3. There is no single 'tolerance for risk'. Levels of concern about the risk vary within risk zones as much as between risk zones and are more likely to be based on personal factors (e.g., financial commitment, resilience, experience of hazard events) rather than risk exposure. Different groups (e.g., homeowners, investment property owners, accommodation businesses, and corporate businesses) have differing concerns about how the hazard affects them and the impacts of any management response.

Do people accept there is a risk?

2.4. **There was broad acceptance that the risk exists, and, now having been identified by QLDC, there should be some form of response to this risk.**

2.5. All those who took part in the 'Risk Response Discussions' considered the risk significant enough to warrant some form of action on the part of QLDC. Question 2 in the 'Risk Response Discussion' questionnaire asked people "*Which statement best describes your views on the hazard and its potential impact on you?* No one chose option 3 which said "*the hazard does not concern me. I don't think anything needs to be done to reduce the risk to people or property*".

2.6. Most people who attended the meetings were concerned about the hazard – both because of the potential threat to personal safety and to loss of property, and because they believed the inclusion of the hazard on the LIM and the overhanging QLDC process left them 'in limbo' unless some action was taken. Some people were clearly concerned for others in the community as well as for themselves.

Are people concerned about the risk?

2.7. **There is genuine concern about the risk but there is also a desire that any response be proportionate to this risk**

2.8. There were some people across all the risk levels (high, moderate, and low) who appeared very concerned. These people were almost exclusively those who owned and lived in their own home. Regardless of the level of risk they faced, they expressed the view that "*something needs to be done to reduce the risk and to keep people and property safe'*.

2.9. Most others expressed the view that while they were concerned about the hazard they were equally concerned about the impacts of the response to the hazard and how these would be paid for. These people responded to Question 2 in the risk response questionnaire with option 2: *This hazard seems like it could potentially affect me but does not overly concern me. I would prefer the risk to people, and property was reduced but not at any cost*.

2.10. One person in an individual interview who is in the highest risk area believed he would personally be prepared to live with the risk but accepted this might not be the same for others. He did not believe the risk to the property he owned in the moderate risk area warranted mitigation. This person did not attend the 'Hear about the Hazard' sessions.

2.11. **Concern about the hazard risk was often linked to concern about how it affected property value, and people's ability to continue to live in the area, sell, develop, or pass on their property.**

2.12. At the 'Hear about the Hazards' – 'What Matters to You?' station people expressed more varied concerns about the risk response than they did about the hazard. On both days people put up phrases to indicate they were concerned about ensuring safety and protecting people and property but then quickly moved on to other matters that concerned them. In many circumstances this was a genuine concern and some people who came after these phrases had been put up by others in the 'Also matters' rather than 'Matters Most' section were disturbed that those who had come before them had not given this greater priority. Notably however, these phrases about the risk and hazard did not include concerns about living with the effects of being involved in a hazard event (e.g., impacts on life during an event, length of time to recover from an event). This is consistent with a community that has limited experience of being involved in a hazard event.

2.13. Other matters of concern that were included in the 'What Matters to You?' board were varied and related to the impact of the hazard risk label itself or the chosen management response, or the uncertainty of the situation. [See below: commonly included phrases at the 'What matters to you?' station.]

What matters most?	
Commonly chosen phrases about the hazard and risk	Phrases about hazard and risk **not chosen**
People and property are safe from hazards now and in the future *Loss of life or injury from a hazard event* *Damage or loss of property and costs due to a hazard event.*	*The long-term effects of a hazard event* *Minimum disruption to daily life if an event happens* *There is guidance and support on how to respond to a hazard event* *Businesses are not disrupted by hazard events* *I can run my business without concern about disruptions from hazard events*
Other concerns – **commonly chosen**	Other concerns – **not chosen**
*Effect on **property values** (including long term); my property does not go down in value; effect on property development options.* *Effect on home **insuranc**e* ***Financial impact**: Compensation if have to move; Not financially worse off because of an intervention to manage the risk* ***Uncertainty** and **impact of decision process**, The QLDC decision process and how long it will take. Who will want to buy my house in this situation? Need for good information* ***Limited options** for moving elsewhere in Queenstown; Don't want to have to leave Queenstown.*	*Effect on businesses and their ability to operate in the area* *Effect on property development options* *There are good opportunities for development in the Brewery Creek and Reavers Lane vicinity* *Undertaking property development for private or business use doesn't become overly bureaucratic*

How do views of the risk differ across different groups in the community?

2.14. **Overall concern about the risk varied *within* risk zones as much as *between* risk zones and are more likely to be based on personal factors rather than risk exposure.**

2.15. There were examples of people in the highest risk area, who said they were not personally concerned about the risk and those in the lowest risk, who were very concerned. People's expressed level of concern about the hazard risk itself seemed to be dependent on many factors including, their own experience of the reality of hazard events, their capacity and resilience, their personal involvement and commitment to the area, and their experience with making risk decisions.

2.16. The group in the highest risk area were most actively concerned about the cost of response to the risk and had the widest variance of views about this. This group was small, and each member had very different circumstances. It included one person who owned and lived in their own home and would have low capacity and resilience to respond to a hazard or to bear significant costs or financial losses because of any management response. This person considered themselves very concerned about the hazard and less concerned about which

option would be best. Rather they hoped for assurance that there would be some form of government support to address this and did not want to be left on their own to deal with it. The other members of this group were owners of accommodation businesses or private investment properties that are currently rented. Those in the high-risk area have the most at stake and are aware that decisions about how the hazard is addressed could have profound implications for them. Some of them see the response as an equal, if not greater, concern than the risk itself.

2.17. Loss of property values through (a) increased insurance costs or un-insurability, (b) un-managed hazard risk, and (c) loss of development opportunity, is significant for a number of people. This includes those running small property rental businesses and homeowners alike.

2.18. Below are some of the common concerns, hopes and views expressed by people with different types of connection to the area.

<table>
<tr><th colspan="2">Common concerns/hopes/view</th></tr>
<tr><td rowspan="2">Homeowners in moderate/low risk areas

Note a number of these people are retired or on lower incomes. This impacts their capacity and resilience in the event of a disaster as well as affects their ability to sustain financial impact from a risk response measure.</td><td>Hope it will be possible to mitigate the risk so they can continue to live in the property or can sell without loss of value.</td></tr>
<tr><td>Concerned about:
Stigma of hazard being identified on the LIM
Uncertainty and protracted decision process
Lack of comparable housing options within the Queenstown area
Inadequate compensation for leaving the area resulting in financial loss
Ability to get insurance or rising cost of insurance
Potential impact of engineering works on access or disruption during development.</td></tr>
<tr><td rowspan="2">Owners of investment and rental properties</td><td>Hope it will be possible to mitigate the risk to an acceptable level (e.g., through engineering) and not impose restrictions that will impact on future development value.</td></tr>
<tr><td>Concerned about:
Gap in current market value vs rating valuation – could lead to inadequate compensation in ‘Reduce’ option
Sunk costs in developing property – based on business loans so could have significant impact
Ability to get insurance or rising cost of insurance
QLDC continued allowance of development in the area
Spread of costs for mitigation – don’t want to pay for something that doesn’t relate to the risk to their properties.</td></tr>
</table>

Accommodation providers	Varied: • One had significant attachment to the area and to the prospect of developing their business. They had invested considerably in development of the property and in a bespoke hazard management plan for the property. • Other– had owned business for a long time and would be willing to accept the need to 'sell out' if necessary.
	Concerned about: • Uncertainty having big impact on modest sized businesses – "*who would buy this business right now*?" • Sunk development costs • Constraints on numbers of people allowed in area or type of development allowed would impact business viability.
Corporate businesses	Pragmatic and accepting of the need for QLDC to respond. Expect to have the capacity to adapt if need to leave area
	Concerned about: • Would want compensation to be adequate • Housing shortage has a big impact on seasonal staff wellbeing and the Gorge Road situation potentially contributes further to this • Value of the land is in development potential – wondering if there is compensation for loss of development value.
Businesses within the Brewery Creek/Industrial Place area	Engagement with this specific group was very low. Feedback provided by a couple of other participants suggested that those in this group were too busy and viewed their involvement at this stage as a low priority – expecting that QLDC would determine the direction it wanted to go regardless.
Owners of properties that cross different risk lines	• Could create unworkable situation where rules differ over a single property holding • Uncertainty about where the lines will be drawn
Property owners – adjacent to the main risk area	• Cost of mitigation – how will this be shared with those adjacent? • Disruption/access issues during engineering works • Property values – being adjacent to risk area • Impact of hazard event – could still be significant for adjacent areas

2.19. Some tenants attended the 'Hear about the Hazards' drop-in sessions and some participants at the 'Risk Response Discussions' and individual meetings were connected with visitor accommodation. However, as anticipated, the tenants and short-term visitors to the area were hard to connect with through the consultation and engagement process and their views cannot be accurately represented here. There is a growing field of research on the vulnerabilities of transient groups including tourists, and this can be used to assist the planning response development.

2.20. It is worth noting that the information about the Gorge Road community provided by the social impact assessment [see reports Appendix A] suggested that this community is "*likely*

to be more mobile and less connected to the area". Those we heard from at the 'Hear about the Hazards' and the 'Risk Response Discussions' and the individual interviews expressed value in the area particularly for its characteristics of affordability, and location near town. This connection was expressed as a desire to continue to live in the area, and a concern about the limited equivalent options elsewhere in Queenstown – including for investment and seasonal worker accommodation. As a self-selecting group of primarily property owners and homeowners this connection is understandable.

Views on the Risk Response Options

Summary:

2.21. In the risk response discussions participants were asked for their views on how well the four risk response options addressed their concerns over risk (for now and the future) and how well they met concerns over financial impact, maintaining opportunities and providing clarity and certainty for the future [see questionnaire Appendix 2].

2.21.1. *Status quo* was the least preferred option for addressing concerns over risk. Most participants regarded this response as being (1) unjustifiable in high-risk areas (2) creating a stigma for property with hazard risk on the LIM.

2.21.2. *Engineering* was most preferred and specifically Rockfall fencing was the lead preferred option. Rockfall fencing will clearly benefit some people and those who are aware of this are very keen on it. Some others appear confused or hopeful that rockfall fencing will mitigate the overall risk to a level that will be acceptable/or are still hopeful that other engineering will be possible to reduce the debris flow risk sufficiently. Potential costs of engineering and how these will be paid for was the implementation issue people were most concerned about.

2.21.3. The *Reduce* option is regarded as a last resort. It needed more clarity on several factors (e.g., how compensation would be negotiated, and the decision process). Reduce was recognised as having potential to address risk in high-risk areas and received mixed views in moderate risk areas. It was regarded as inappropriate (possibly too extreme) for the risk in low-risk areas. Reduce evoked strong negative views in some people but others wanted it to be further developed to provide a clearer option. No one chose it as their preferred option although owners of some of the larger businesses were pragmatic about it.

2.21.4. *Manage* was recognised by some as having an overall risk reduction potential for future risk but was regarded less positively overall for addressing concerns over the hazard risk because it did nothing tangible for those currently living and owning property in the area. Manage had the fewest positive responses overall, as well as the most diversity of views and 'unsure' answers regarding implementation concerns. This is an option that appears to benefit no one currently living in the area.

Table 4 below shows the generalised trends of views about the four management options

Table 4: views of risk management options

	Addresses concerns over risk for now and in the future			Addresses concerns over impacts of managing the risk								
				Financial impact			Maintains opportunities			Provides clarity and certainty		
Status Quo												
Engineering						unsure						
Manage							unsure					
Reduce		unsure										
Risk level	**High**	**Med**	**Low**	**High**	**Med**	**Low**	**High**	**Med**	**Low**	**High**	**Med**	**Low**

Strong negative: Complete or predominant view is "does not address concerns"	Strong positive: Complete or predominant view is "Addresses concerns well"	Mixed views
Soft negative: General trend is does not address concerns or only partially.	Soft positive: General trend is does address concerns or only partially	Uncertainty plus mixed views

Status Quo:

2.22. Most participants regarded this response as being (1) unjustifiable in high-risk areas (2) creating a stigma for property with hazard risk on the LIM.

2.23. Three respondents included *Status quo* as part of their 'preferred options' but only one saw it as a viable approach to their situation without any additional measures. This person was on the edge of the low-risk area. The two others had property in the high-risk area. One of these two thought *status quo* could be matched with Engineering, the other thought *Status quo* would include specific hazard risk related guidelines which could be addressed by the property owner and managed through the consent process. Those who selected *Status quo* chose it as a way to express a preference to retain flexibility in how they developed their property.

2.24. **Risk/hazard management:** Predominantly unacceptable. Most respondents viewed this option as not being able to satisfactorily address their concerns about the risk for people and property now or in the future. *Status quo* was regarded least favourably of all four options for risk and hazard management outcomes.

2.25. **Impact of implementation** – The *status quo* option had mixed views over how well it addressed the three aspects of implementation (1) financial impact (2) maintaining options (3) creating certainty.

Engineering:

2.26. *Engineering* was viewed most positively of all four options for both risk and hazard management and impact of implementation. However, there were some significant areas of uncertainty and some confusion about how the different measures (rockfall fencing and other engineering works) interacted leading to hopeful speculation that engineering measures could at least reduce some of the risk and bring overall risk to tolerable levels. Some of those who answered the questionnaire responded to all options other than *Engineering* as unsatisfactory against all criteria – i.e., they viewed an engineering solution

as the only one accepted to them. *Engineering* and particularly *rockfall fencing* received the most votes for the risk response option that QLDC should explore further to help clarify.

2.27. **Risk/hazard management.** Respondents in all risk levels were inclined to view engineering positively for risk and hazard management with those in moderate and low risk areas viewing it most positively. The low-risk group includes some who are only affected by rock fall and would therefore benefit significantly from rock fall fencing. There was general recognition that the engineering assessments had found that debris flow measures were ineffective against medium and large events and that building them could represent significant disruption to the area. This created uncertainty in people's minds as to how to separate the two types of engineering and if one was instigated (rockfall fencing) – what risks would remain for them, and could they live with them?

2.28. **Impact of implementation** Engineering was regarded as having the greatest potential of all four options for providing clarity so people can make decisions for the future. However, because rockfall fencing and debris flow measures had different efficacy and people were informed that the maintenance costs (and how these would be paid for) were currently unknown, people had mixed views and uncertainty about how engineering might impact them financially. The financial impact of engineering generated the most diverse response across the three risk groups with those in the high-risk group being most concerned, those in the moderate risk group being most optimistic, and those in the low-risk group being most unsure.

Manage:

2.29. *Manage* was generally not well regarded as addressing concerns for risk or regarding implementation and generated several "unsure" responses. It appeared to offer few benefits to people currently living or owning property in the area.

2.30. **Risk/hazard management.** There was an overall negative view of how *Manage* would address risk – even for the future which is understandable as this approach addresses the risk profile rather than offering any mitigation of the hazard for those who are current residents or property owners. Generally, those who had expressed greatest concern about the hazard had the least favourable response to this option.

2.31. **Impact of implementation** There was a wide diversity of views and considerable uncertainty about how well this option performed against the criteria of (i) not creating unreasonable financial impacts (ii), maintaining opportunities and (iii) providing clarity for the future. People found it hard to imagine how this option would provide certainty – one person going so far as to say that "*plans change*" so could not be relied on. They also imagined that the restrictions on development would mean added constraints without the benefit of providing any hazard reduction.

Reduce:

2.32. This was regarded as a drastic option. No respondent included it as their preferred option. While some were very opposed and did not see this as having positive benefits across any criteria (for hazard risk management or impacts of implementation) – others were more pragmatic or wanted to see this option explored for those who might really need it. Those in the lowest risk group were the most negative about the *Reduce* option and did not see it

as appropriate for addressing the risk. There were significant uncertainties about how this option might be progressed and concern about the time frame to negotiate it.

2.33. **Risk/hazard management.** There was reluctant acceptance that this option might have positive benefits for risk reduction in the highest risk areas. The question of future use of the land vacated in this process was raised by some, with the suggestion that it could be used to achieve some positive, low risk, social outcomes for Queenstown.

2.34. **Impact of implementation** There was clearly a concern that the Reduce option would create unreasonable financial burden. Three of the larger business participants held views that were more pragmatic and as they expected there to be negotiation over the compensation. Reduce clearly offered little in terms of maintaining opportunities for the future except for those who foresaw a compensation payment would enable them to invest similarly elsewhere (again these were the larger corporate businesses). Concerns about the lack of availability of property in Queenstown in a similar price range to enable re-location may well have influenced this view. One owner of rental property in the high-risk area cited her concerns about the discrepancy between current property prices and rating valuations.

2.35. Uncertainty and divergence of view was high amongst those in the moderate risk group. This could suggest that some in this group would like to know more about the potential of this option. One person in the low-risk group was disappointed that it was unlikely that this would be an option for them – even if it was not what they would prefer.

Key messages for QLDC

Views on risk and expectations of response

2.36. There is considerable concern about the Gorge Road hazards and the implications for personal safety, and long-term viability of the area, amongst those who participated in the consultation and engagement activities. This includes the concern that, since the hazard has been identified, inaction (including the *status quo* option) would be detrimental to property values and create uncertainty, making it hard for those who own property in the hazard area to sell.

2.37. Almost no one regarded the risk, (whether in the low, moderate, or high-risk areas) as acceptable – i.e., not requiring mitigation. However, there was also no single tolerance for risk. Levels of concern about the risk vary as much within risk zones as between risk zones and are based on personal factors (financial commitment, resilience, experience of hazard events and risk decisions) as well as risk exposure. Those who showed greatest concern (i.e., least tolerance) were generally property owners who lived in their own homes.

2.38. Different groups (e.g., homeowners, investment property owners, accommodation businesses, and corporate businesses) have differing concerns about how the hazard affects them and the impacts of any management response.

2.39. Views on the risk and on the options diverged most amongst the highest risk group. This is a small group and those who took part had varying circumstances.

Views on preferred response

2.40. There is general acceptance that QLDC will need to act to manage the risk across all risk levels – even low risk areas (see risk groupings Introduction section paragraph 1.9) but participants were keen that the response to the risk be proportional. Since people are not generally focussing on the implications of being involved in a hazard event long term, they more acutely feel the potential negative costs of addressing the hazard.

2.41. Living with the risk by adjusting the risk profile (e.g., through restricting further development) is not attractive to people. People want tangible evidence that the chosen response will address the hazard for those who are here right now– either through engineering or even through removing people from harm's way.

2.42. The *Reduce* option is regarded as a 'last resort'. It needed more clarity on several factors (e.g., how compensation would be negotiated, and the decision process). *Reduce* evoked strong negative views in some people but others wanted it to be further developed to provide a clearer option. No one chose it as their preferred option although the owner of some of the larger businesses seemed pragmatic about it, and some people wanted it further explored to provide an option for those who need it.

2.43. *Rockfall fencing* was the lead preferred option. *Rockfall fencing* will clearly benefit some people and those who are aware of this are very keen on it. Some others appear confused or hopeful that rockfall fencing will mitigate the overall risk to a level that will be acceptable/or are still hopeful that other engineering will be possible to reduce the debris flow risk sufficiently.

2.44. Manage had the least positive as well as the most diversity of views and 'unsure' answers. This is an option that appears to benefit no one currently living in the area.

2.45. None of the four options presented to people were universally positively viewed for both satisfactory management of the hazard risk and for impacts of implementation (financial impact, ability of option to maintain opportunities and whether it provides clarity and certainty for the future).

Views on the consultation and public engagement process

1.1. The risk engagement achieved positive interactions and high-quality feedback from concerned and affected people within the risk area. A large amount of information was shared in a staged way to allow people to develop their understanding and form an opinion. People made comments such as "I am glad I came" and expressed the view that this was a hard decision.

1.2. Participants at the 'Hear about the Hazards' sessions came from across both the Brewery Creek and Reavers study area, and there were participants from across the high, moderate and low risk areas who attended the "Risk Response Discussion" meetings. These people were predominantly owners of property in the affected areas. Those who took part expressed value in the area for a range of reasons – particularly linked to the lack of similar residential options within Queenstown.

1.3. There is little appetite for further consultation without significant progress towards a decision. Uncertainty, and protracted process is a source of stress for people in the affected community.

Other matters

1.4. During the consultation and engagement activities people raised several issues that they had questions or concerns about:

- How the hazard risk label on the LIM impacts property value, re-sale, and insurance
- How the different management options will impact property value, re-sale, and insurance – including in adjacent areas.
- How does land management (forests and culvert maintenance) effect the hazard risk – can this be part of the risk mitigation options?
- How will the "*lines be drawn*" and what are the implications for those with split risk levels on their properties?
- How might land vacated for the Reduce option be used? Could it be allocated to provide some social benefit for the area?

3. Contribution to robustness of decision-making

3.1. The consultation and engagement approach were designed to meet criteria for robust public engagement on risk as well as QLDC's own guiding principles for public consultation.

3.2. Robust public engagement on risk has three components: valid process, valid interpretation of feedback, and valid and transparent integration into a decision [see table below]. This section provides comments on how well the QLDC public engagement on risk meets the criteria for valid process and valid interpretation. How the feedback is used in future decisions forms part of the next stages of planning response for the Gorge Road hazard risk.

Robust public engagement on risk

Valid risk engagement process

- all affected parties are identified and given a range of opportunities to engage
- technical information is shared in a way that is accessible
- stakeholders are helped to understand 'risk' as more than chance or likelihood and to appreciate the possible consequences for them.
- Stakeholder tolerance/intolerance of a risk is understood as having implications for how the local planning agency may act (e.g., introduce new zoning and development guidelines)
- Stakeholders are given an opportunity to review risk mitigation/management measures and take part in a discussion on the trade-offs between margins of safety, possible benefits, and costs of mitigation

Valid interpretation of feedback

Individuals in a community can have very different responses to risk. Good process makes efforts to understand the full range of concerns of stakeholders (not to "average" responses or to be swayed by dominant voices) and to carry this range through to decisions.

Valid and transparent integration into decision

It is clear how the views of affected community and stakeholders have been used in the decision-making process, particularly how they have been integrated with technical and political contributions.

QLDC public consultation principles:

- *Concise, clear information provided.*
- *Timely information – enough time for people to digest information and form an opinion.*
- *Transparency – share information with those affected when we have it.*
- *Compassion*

Activities and participation in the public engagement process

3.3. The public engagement process was designed to provide diverse opportunities for different community members to participate and there was a concerted effort to notify and communicate with different groups – including homeowners, investment property owners, renters, accommodation providers and business owners.

3.4. The '**Hear about the Hazards'** drop-in session provided very good access and interpretation of the technical information that QLDC had commissioned. They were attended by participants from across the review area. Participants spent a long time reviewing the presentations and appreciated the chance to speak one-on-one with Council's technical experts and QLDC staff. There were positive comments about the effort that had clearly been made by QLDC to present the material in an accessible way. Attendance was primarily by homeowners and owners of investment properties in the elevated risk areas, with some participation by those in adjacent areas. There was some limited participation by renters and those who worked or owned businesses in the area.

3.4.1. Participants at the Drop-ins provided several sources of feedback:

- at a station with a map of the area they marked their locations of interest and connection.
- at a station called "What matters to you?" participants chose key phrases to express important concerns or questions – or offered their own words.
- at the final table they could leave further feedback. In addition, the QLDC staff, ORC staff and technical advisors collected their own observations from the numerous conversations held during the two days.

3.5. The '**Risk Response Discussions'** had much smaller participation. However, these meetings still provided very good open discussion amongst those who did participate. Some participants were clearly reassured by being able to attend the meetings and commented *"I am glad I came".*

3.5.1. Participants at the 'Risk Response Discussions' filled in a questionnaire following the presentations and group discussions [see Appendix 2]. The questionnaire asked participants about their overall view of the hazard risk and its impact on them and how well each of the risk response options addressed their concerns over hazard risk now and for the future. It also asked how well each option addressed three implementation issues: (i) creating unreasonable financial impacts, (ii) maintaining opportunities for the future, and (iii) providing clarity. These three were chosen as the most common matters of interest raised by people at the 'Hear about the Hazards' drop-in sessions.

3.5.2. Participants were also asked to proportionally vote (they had seven tokens and could distribute them according to their preference) for five risk response options (*Status quo, rock fall fencing, other engineering works, manage, reduce*) in answer to the question: "*What do you think QLDC should investigate further?"*

3.6. The 'Risk Response' group discussions were supplemented by several individual meetings between QLDC staff and concerned community members.

3.7. The Business community, including those who own or operate businesses within the Business Zone at Brewery Creek, proved most difficult to engage with and there was a very

low attendance at the 'Risk Response Discussion' session dedicated to this group, despite notification by email and hand delivered notice drops to businesses. However individual meetings were held with two of the large corporations with interests in and adjacent to the area as well as meetings with the owners of the smaller accommodation businesses.

3.8. The 'Let's talk' website provided a good resource to direct people to for further information. However, no one used the online form to provide feedback. The brochure that was produced before the 'Hear about the Hazards' session was frequently referred to by people.

3.9. Collectively, all the public participation sessions, the individual meetings, and the correspondence from different community members has provided substantive information about how different people viewed the hazard risk itself and the options to address the risk. All this information, together with correspondence and notes from meetings with community connectors, has been assessed and used to respond to several guiding questions provided by QLDC.

Checking back – how well did we do?

3.10. Ensuring good process has been followed and the desired participation and feedback from affected people has been achieved is an important part of a robust risk-engagement process.

3.11. Table 5 below matches level of achievement against the criteria for robust engagement process, and QLDC's own communication principles.

Table 5: Level of achievement against the criteria for robust engagement process and QLDC's own communication principles		
Level of achievement: Fully achieved; Mostly achieved; More work needed		
Guiding criteria		Comments
Participation		
Those affected by the hazard and the possible risk management options are identified and provided with a range of appropriate opportunities to engage.		• Engagement approach included multiple face-to-face events, to meet with experts and QLDC staff • QLDC staff met with 'community connectors' to help understand who was in the affected community and how to bridge the potential gap with those who are less likely to come to public meetings. QLDC staff used communication channels used by various community connectors in an effort to reach a greater number of people who might be located within the area effected by the plan review. • Those who were interested but unable to attend events were given further opportunities to meet with QLDC staff. • Written and online feedback was provided for via the QLDC 'Let's Talk' website.
Stakeholders are given an opportunity to review risk mitigation/management measures and take part in a discussion on the trade-offs between margins of safety, possible benefits, and costs of mitigation.		• Small group discussions at the "Risk Response" meetings were specifically designed with this in mind. They allowed people who were facing similar risks to voice their different views and to ask questions about what most concerned them.
There is good uptake of the different opportunities from different stakeholders with diverse views.		• Hear about the Hazards drop-in sessions were attended by participants across Brewery Creek and Reavers fan • Those who attended the 'Risk Response' meetings were very engaged and expressed that they were glad of the opportunity to participate • There was little engagement from renters/non- property owners and very low participation from Brewery Creek Industrial zone despite direct door-to-door contact. Subsequently some one-on-one interviews were held with some business owners. • Errors with email communications may have affected participation at the 'Risk Response' meetings
Good opportunities and multiple moments to provide meaningful feedback		• The quality of the feedback from those who participated was very high. People spent a long time at both the 'Hear about the Hazards' and 'Risk Response' sessions and in the one-on-one meetings. Some provided written feedback afterwards as well.

Building capacity to provide a considered response		
Technical Information is shared in a way that is accessible, concise, and clear.		• There was good appreciation by participants at all sessions of the ability to talk directly with technical advisors and QLDC staff • QLDC staff made two scheduled presentations at each of the 'Hear about the Hazards' sessions. These presentations described the situation and decisions that were being faced. • The Brochure seemed to be effective – people at Drop-ins and Risk Response Discussions brought along their copies of this • QLDCs Let's Talk project website was used as a public portal of information where all summary and technical information was uploaded. The website was also used to host a range of frequently asked questions and to respond directly to questions and comments made by members of the public. This website was updated regularly including with a timeline of past, present, and future steps associated with the project.
Timely and transparent information sharing – share information with those affected when we have it and provide enough time for people to digest information and form an opinion.		• The engagement approach employed a phased release of information and opportunities for people to learn about the hazard and the response options. This was designed to allow people time to review information and progressively build their capacity to respond. • There isn't an end point for opportunities for people to understand the information as this continues to be available on QLDC website and staff are still responsive to enquiries.
Stakeholders understand risk as more than chance or likelihood and can appreciate the possible consequences for them.		• Appreciating the consequences of a hazard and being able to make judgements about tolerability on this rather than just the likelihood of an event is an important part of risk engagement. Considerable effort went into conveying this information at the 'Hear about the Hazards' sessions, however, there was some evidence that not everyone had fully understood the concept of risk– and may have not spoken with the technical experts.
People understand there is a link between risk tolerance or intolerance and the likely plans/management approaches that might be used (e.g., introduce new zoning and development guidelines)		• 'Hear about the Hazards' clearly connected these two. People understood there was a risk and a possible response. • The 'Risk Response' discussions further clarified that the hazard risk might be addressed in different ways according to the level of risk. People's responses from these meetings suggested they understood this link as they made observations about expecting a "mixed response" would be needed across the area and expressed a view that, given some of the responses had potential negative impacts on other aspects of their lives, the response should be appropriate to the risk.

Respect and Compassion		
Compassion –– some members of the community may experience mental, emotional, or financial distress as a result of the information on the levels of risk, and/or the impacts of the response options		• Providing a trained counsellor at the 'Hear about the Hazards' drop-ins was useful on a couple of occasions and helped staff as well as participants. It also signalled QLDC's awareness of the potential personal challenges of the situation and their commitment to assisting people navigate these challenges. • The phased approach to introducing information followed by seeking feedback with the intention of proactively upskilling people to enable them to engage in the decision-making process more fully. • A genuine willingness to listen and learn from communities. • Genuine incorporation of views into decision making.

Appendix 1: Reports prepared for Queenstown Lakes District Council Natural Hazards Review of Brewery Creek and Reavers Lane

1. Natural Hazards Affecting Gorge Road, Queenstown: Prepared by Beca Limited; 12 November 2020
2. Gorge Road Natural Hazards-Engineering Options Report: Prepared by Beca Limited; 2 March 2021
3. Queenstown Debris Flow and Rockfall Loss Modelling for Land-Use Planning Policy Options: GNS Science Consultancy Report 2021/07; May 2021
4. Gorge Road Hazards Social and Economic Impact Report: M.e Consulting; 09 July 2021

Gorge Road Hazard Risk Management
Tell us your views

Date of meeting …….

Name (optional)……. **Email** (optional)……

Question 1. Tell us about your situation:

What part of Brewery Creek or Reavers Lane are you connected with?

……..

Which best describes your situation [please circle your answer]

I own an investment property in the area that I do not live in.

I am a homeowner in the area and normally live there.

I own multiple properties in the area

I run or have interest in a business in the area

I intend to live in the area in the future and have bought property there

I live in the area but do not own property.

My place of work is in the area

Other (please state)

……..

Question 2: Which statement best describes your views on the hazard and its potential impact on you? [please circle your answer]

1. *This hazard concerns me. I think something needs to be done to reduce the risk and to keep people and property safe*
2. *This hazard seems like it could potentially affect me but does not overly concern me. I would prefer the risk to people, and property was reduced but not at any cost*
3. *This hazard does not concern me. I don't think anything needs to be done to reduce the risk to people or property.*

Question 3: Tell us what you think of each of the proposed options to address the hazard risk

[please circle your answers]

Option 1 – A 'Status Quo" [Risk assessed on case-by-case basis]

a. **Addresses my concerns over the natural hazard risk for those who live and work and own property in the area**
   Does this very well……Does some but not all of this …… Does not address this……..Unsure

b. **Addresses my concerns over the natural hazard for future residents, property owners and those who may work in the area**
   Does this very well……Does some but not all of this …… Does not address this……..Unsure

c. **Does not create unreasonable financial impacts for me**
   Does this very well……Does some but not all of this …… Does not address this……..Unsure

d. **Maintains my opportunities for the future in this area**
   Does this very well……Does some but not all of this …… Does not address this……..Unsure

e. **Is clear what will happen to my home and property so I can make decisions for the future**
   Does this very well……Does some but not all of this …… Does not address this……..Unsure

Option 2– Engineering [Rockfall fencing + channel or + Debris flow fencing]

[please circle your answers]

a. **Addresses my concerns over the natural hazard risk for those who live and work and own property in the area**
   Does this very well……Does some but not all of this …… Does not address this……..Unsure

b. **Addresses my concerns over the natural hazard for future residents, property owners and those who may work in the area**
   Does this very well……Does some but not all of this …… Does not address this……..Unsure

c. **Does not create unreasonable financial impacts for me**
   Does this very well……Does some but not all of this …… Does not address this……..Unsure

d. **Maintains my opportunities for the future in this area**
Does this very well……Does some but not all of this …… Does not address this……..Unsure

e. **Is clear what will happen to my home and property so I can make decisions for the future**
Does this very well……Does some but not all of this …… Does not address this……..Unsure

<u>Option 3 – Manage</u> [Land use planning rules that control future development]
[circle your answers]

a. **Addresses my concerns over the natural hazard risk for those who live and work and own property in the area**
Does this very well……Does some but not all of this …… Does not address this……..Unsure

b. **Addresses my concerns over the natural hazard for future residents, property owners and those who may work in the area**
Does this very well……Does some but not all of this …… Does not address this……..Unsure

c. **Does not create unreasonable financial impacts for me**
Does this very well……Does some but not all of this …… Does not address this……..Unsure

d. **Maintains my opportunities for the future in this area**
Does this very well……Does some but not all of this …… Does not address this……..Unsure

e. **Is clear what will happen to my home and property so I can make decisions for the future**
Does this very well……Does some but not all of this …… Does not address this……..Unsure

<u>Option 4 – Reduce</u> [Remove all built form and existing uses]

[circle your answers]

a. **Addresses my concerns over the natural hazard risk for those who live and work and own property in the area**
Does this very well……Does some but not all of this …… Does not address this……..Unsure

b. **Addresses my concerns over the natural hazard for future residents, property owners and those who may work in the area**
Does this very well……Does some but not all of this …… Does not address this……..Unsure

c. **Does not create unreasonable financial impacts for me**
Does this very well……Does some but not all of this …… Does not address this……..Unsure

d. **Maintains my opportunities for the future in this area**
Does this very well……Does some but not all of this …… Does not address this……..Unsure

e. **Is clear what will happen to my home and property so I can make decisions for the future**
Does this very well……Does some but not all of this …… Does not address this……..Unsure

Question 4: Tell us if there is an option that you prefer

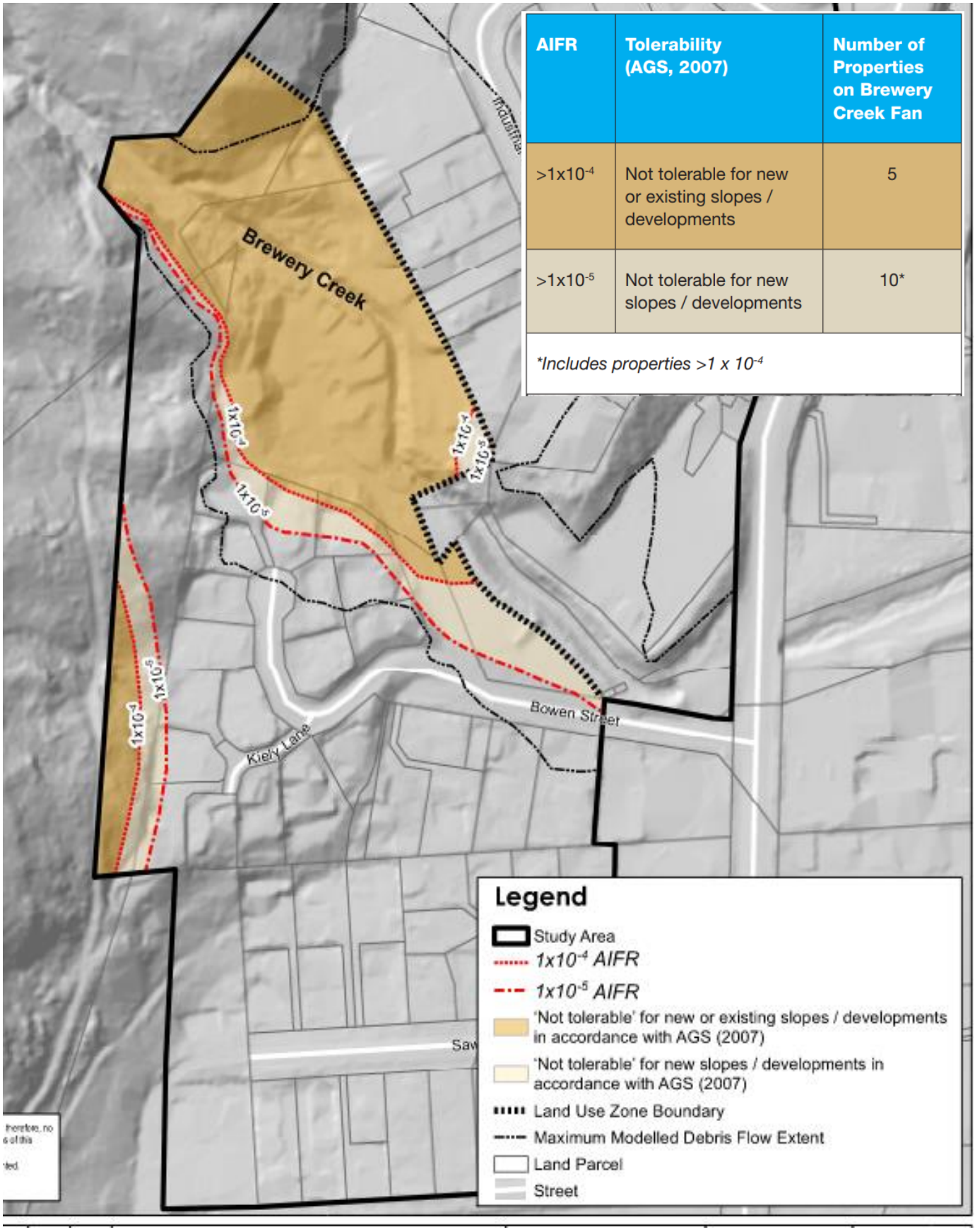
……

If we went ahead with this option what would still concern you?

……

……

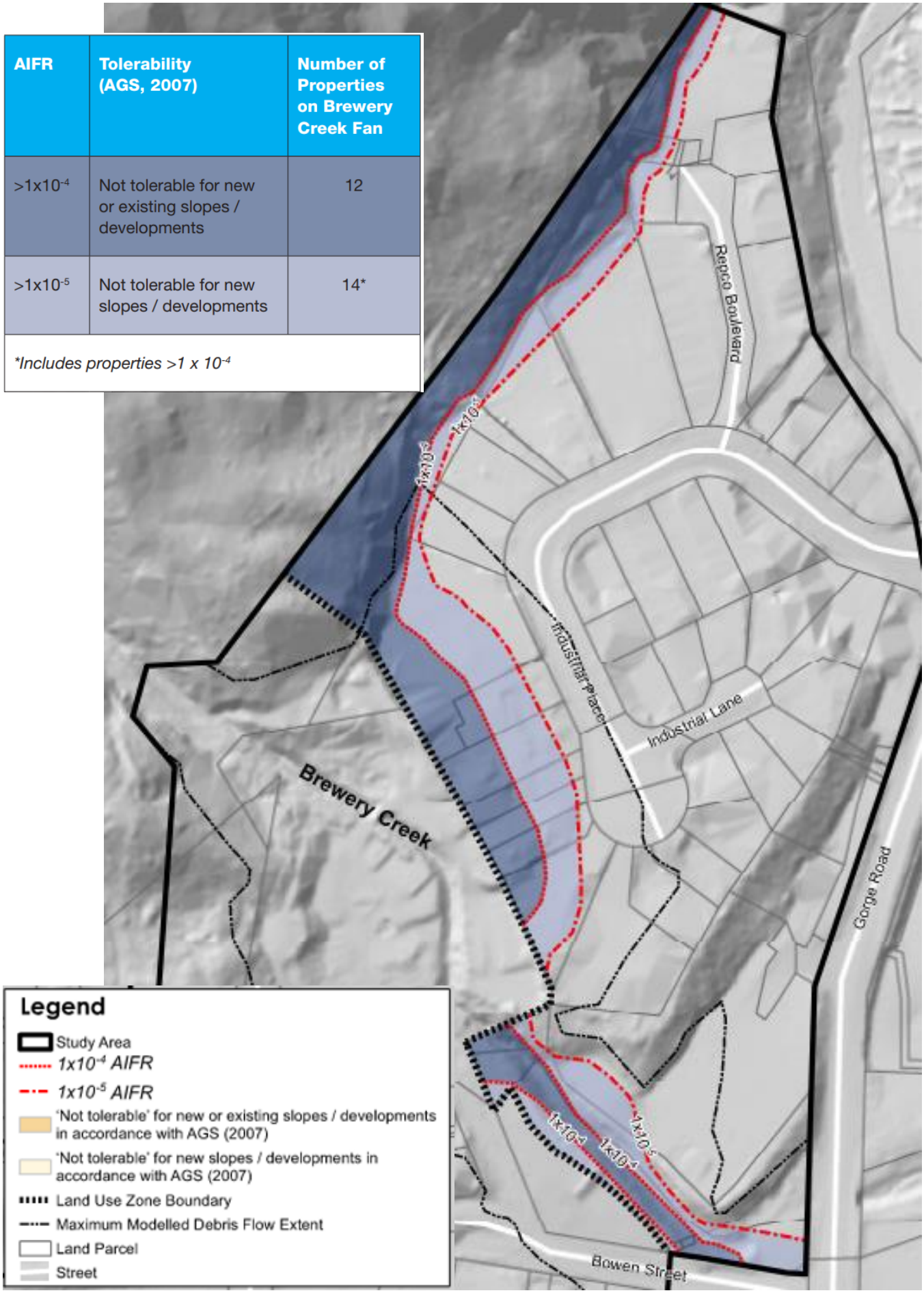
Thank you!

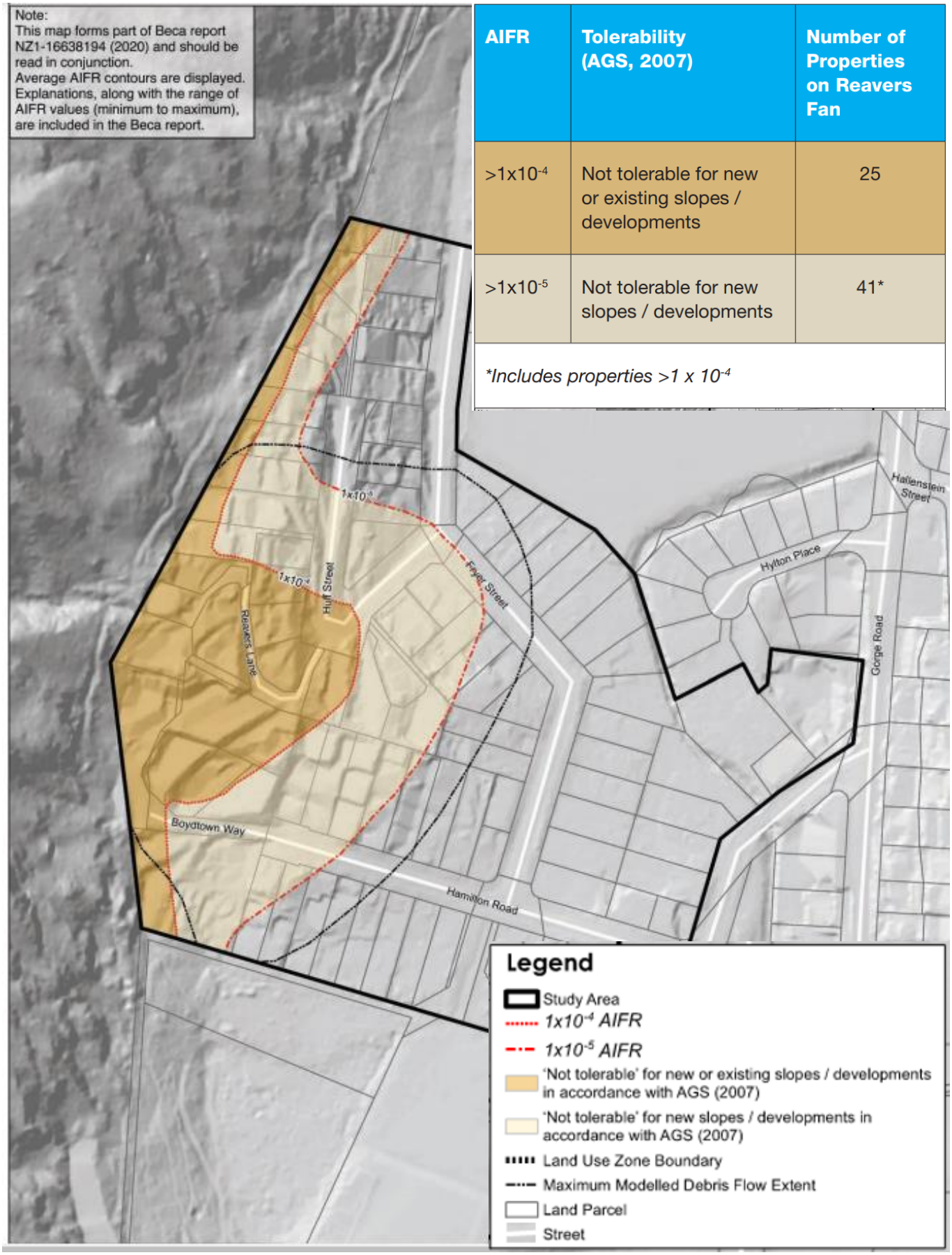


AIFR	Tolerability (AGS, 2007)	Number of Properties on Brewery Creek Fan
>1x10^{-4}	Not tolerable for new or existing slopes / developments	5
>1x10^{-5}	Not tolerable for new slopes / developments	10*
*Includes properties >1 x 10^{-4}		

AIFR	Tolerability (AGS, 2007)	Number of Properties on Brewery Creek Fan
>1x10^{-4}	Not tolerable for new or existing slopes / developments	12
>1x10^{-5}	Not tolerable for new slopes / developments	14*

**Includes properties >1 x 10^{-4}*





AIFR	Tolerability (AGS, 2007)	Number of Properties on Reavers Fan
$>1x10^{-4}$	Not tolerable for new or existing slopes / developments	25
$>1x10^{-5}$	Not tolerable for new slopes / developments	41*
**Includes properties >1 x 10^{-4}*		