

# 2014 Speed Limit Review

## Background

This report covers the investigation of the following sites identified for speed limit reductions. These requested changes were sourced from the community through a Scuttlebutt article in October 2014 along with other social media.

The following 5 sites are new sites that were not covered in the 2013 review.

<b>Road</b>	<b>Section</b>
Arthurs Point Rd and Gorge Rd, Arthurs Point	From Watties Track to Coronet Peak Road.
All streets within Quail Rise	All streets within Quail Rise, including Portree Drv.
Queenstown CBD streets	Queenstown CBD streets including Stanley St and Memorial St.
Arrowtown CBD streets	All of Ramshaw Ln and Buckingham St between Berkshire St and Wiltshire St.
Cemetery Rd	Entire length

The following 3 sites were covered in the 2013 speed limit review but are included in this review to ensure any new information is considered.

<b>Road</b>	<b>Section</b>
Centennial Ave and McDonnell Rd, Arrowtown	Sections that are currently 100 km/h.
Kinloch Rd, Kinloch	Through the settlement. (Identified as Greenstone Road by the submitter.)
Arrowtown-Lake Hayes Rd	Section that is currently 100 km/h

There were 2 state highway sections where it is suggested that speed limits are changed. These will be passed onto the NZTA for consideration.

<b>Road</b>	<b>Section</b>
State Highway 6 – Frankton-Ladies Mile Highway	At the intersection with Tuckers Beach Rd.
State Highway 6A – Frankton Rd	Section that is currently 70 km/h.

## Considerations

Speed limit reviews must follow a process specified in the Land Transport Rule: Setting of Speed Limits 2003 (“the Rule”).

There are three elements that are taken into account when determining the appropriate speed limit:

### The rating survey

This is used to calculate the most appropriate speed limit based on the level of development and the road environment.

The level of development (development rating) is calculated based on a frontage rating and a side road rating.

The frontage rating is determined by assigning a “rating unit” to each access point depending on the type of property that is being accessed. A typical residential property rates 1, while a large establishment rates 4. Schools are rated depending on the number of students.

Side roads are rated based on the frontage rating along the first 500m and traffic volumes. The rating can be between 1 and 4.

The road environment (roadway rating) is rated based on: pedestrian facilities and volumes; cyclist facilities and volumes; parking facilities and frequency of parking; the number of lanes and visibility on a road; any traffic control (for example pedestrian crossings or “Stop” signs); and the hierarchy of the road and the type of development.

The process is then complicated by requiring the roadway rating to never be more than the development rating. This is because drivers are more aware of the level of development, and associated activity, and are therefore more likely to recognize that they have to slow down. If there are only roadway issues then drivers are expected to drive to the conditions.

The final rating score is used to determine a recommended speed limit.

### **Speed surveys**

These are carried out so the current speed environment can be taken into account. If drivers are already driving slow enough then a lower speed limit can be applied to match what drivers already see as the safe speed. However, difficulties arise if there are wide variances in speeds and specifying a speed limit may make some drivers speed up to meet the sign posted speed limit, or ignore the speed limit if it is lower than the speeds they are already doing.

### **The safe speed**

This has been traditionally based on feedback from residents and road users, local crash information, and other local knowledge. However, as the information is generally subjective there is no way of applying it consistently. To reduce this subjectivity, consideration is given to a safe speed based on the probability of a fatality resulting from collisions. For example, a pedestrian is likely to survive a crash at 30 km/h, while a head-on crash is considered survivable at 70 km/h, where the percentage chance of death is less than 10%. The NZTA is now giving a greater weighting to this element of the speed limit setting process as it applies its “safe system approach”.

### **Overall**

The three above factors are considered together to determine what is the best speed limit. However, the overall network also needs to be taken into account as:

- there are minimum lengths for speed limits defined in the Rule,
- too many speed limit changes can become confusing for drivers, and
- there should be consistency across the speed limits set. However, consistency can be an issue where past decisions regarding speed limits have been made that become difficult to undo.

Note that this is the technical process. The consultation process is used to consider local issues that might mean more of an emphasis needs to be placed on one of the three areas considered above and therefore a different speed limit is more appropriate (within the general rules of the speed limit rule).

A discussion about each of these elements for each of the roads investigated follows along with a recommended action and alternative actions that could be taken. Appendix 1 contains maps showing the location of each of these roads.

## **Arthurs Point Road/Gorge Road - urban**

### *Background*

The request was for the section from Watties Track on Gorge Rd though to the end of Arthurs Point Rd at Coronet Peak Road to be reduced from 70 km/h to 50 km/h. The road environment has a number of tight corners with advisory speeds of 45 km/h or less and the one-lane Edith Cavell Bridge. The McChesney Road and McMillan Road intersections are tight but the intersections and property accesses on the Arthurs Point Road section are generally well designed with good visibility. There is a commercial area at the northern end of Arthurs Point Road with hotels, restaurants and a bowling alley.

### *Speed Survey*

A speed survey was conducted over a week in November 2014 between McChesney Road and McMillan Road. The average speed was 61 km/h. 91% of vehicles were travelling over 50 km/h, and 57% over 60 km/h, while a little over 12% were travelling over the current speed limit of 70 km/h.

Speed surveys have been conducted monthly between 2011 and 2014 in a location around 600m north of Morning Star Terrace. The typical average speed was 64 km/h and 15% of vehicles were typically over 72 km/h. These speeds are relatively low for a 70 km/h speed limited zone.

Given that drivers are selecting speeds well above 50 km/h, although less than the current speed limit of 70 km/h, reducing the speed limit to 50 km/h will likely seem out of place to drivers.

### *Rating survey*

Based on the level of development and the road environment the calculated speed limit is 80 km/h for the full length. There are no shorter sections where a lower speed limit is justified through the rating process.

### *Safe speed*

Between McChesney Road and Morning Star Terrace there are no pedestrian facilities and pedestrians must therefore walk on the road. The safe speed is therefore 30 km/h to protect pedestrians from death or serious injuries if there is a collision. Lowering the speed limit could therefore be justified although 50 km/h is still not low enough to make a big difference given the exiting speeds in this area. Additionally, lowering the speed limit in just this section would create two extra speed limit changes through Arthurs Point, with no obvious reason for drivers who do not see any pedestrian activity.

The accesses to properties and intersections are generally well designed for a 70 km/h arterial road on Arthurs Point Rd. The intersections on Gorge Road with McChesney Road and McMillan Road are sharper and side impacts are a concern. This indicates a safe speed of 50 km/h. However, these intersections on their own do not justify a lower speed limit.

There have been 21 crashes along this stretch of road over the last 5 years. This included 1 fatal crash near the 70 km/h repeater signs between Coronet Peak Road and the hotels. The pedestrian who was killed was wearing dark clothing in

dark conditions. It is very difficult to know whether vehicle travelling slower due to a lower speed limit would have resulted in injuries rather than death. The other crash of note occurred where a bus failed to stop at the give way line on the south side of the one way Edith Cavell Bridge and slid into trees. Given the speeds in this area it would be unlikely that a lower speed limit would have made a difference. All the other crashes were associated with losing control on ice, or failing to slow enough for sharp bends. It would be unlikely that a lower speed limit would have made a difference in these crashes.

### *Discussion*

It is difficult to justify a lower speed limit on the sections of Gorge Road and Arthurs Point Road between Watties Track and Coronet Peak Road.

The speed calculation process used to ensure consistent speed limits across the country indicates that an 80 km/h speed limit is appropriate. However, given that vehicle speeds are around or less than 70 km/h, this is a more appropriate speed limit based on what drivers see as the speed environment.

The question then remains whether forcing drivers to reduce their speeds by at least 10 km/h will make a difference to safety along this section of road.

Anecdotally, between McChesney Road and Morning Start Terrace, there are greater numbers of pedestrians walking along the edge of the road, either accessing the Shotover Jet area, or between the old and new parts of Arthurs Point. Lower speeds would help in a crash with these pedestrians, although speeds would have to be 30 km/h or less to be able to say crashes are unlikely to cause death or serious injuries.

Overall, Arthurs Point Road is an arterial road, and Gorge Road operates as an arterial road (although it does not have that designation in the District Plan). Intersections and property accesses are generally limited because of the arterial road status. It is not a typical urban area where a 50 km/h would be expected and therefore a speed limit of 50 km/h would not make sense to drivers. It is therefore recommended that the speed limit is not reduced.

The only other option would be to reduce the speed limit to 50 km/h through this site. This will meet the request and potentially reduce the severity of injuries if a pedestrian is struck by a vehicle. However, the lower speed limit it is not likely to make sense to drivers, and maybe ignored. This behavior would then require heavy enforcement in the faster areas.

### *Options and Recommendation*

The recommended option is:

- Leave the speed limit unchanged at 70 km/h.

The alternative option is:

- Propose a 50 km/h speed limit for Gorge Rd from Watties Track to Arthurs Point Road and Arthurs Point Road from Gorge Road to Coronet Peak Road.

## **Quail Rise – all streets**

### *Background*

Quail Rise is a growing sub-division off Tucker Beach Road. It has a rolling landscape and the roads have been designed to be winding rather than straight. However, the lack of line marking on the roads – a requirement within current sub-division standards – has created the appearance of wide open roads, especially on Ferry Hill Drive, the main route through Quail Rise.

It was requested to lower the speed limit to 30 km/h due to the number of children that are around these roads.

### *Surveys*

No surveys were carried out as a number of general requirements in the speed limit rules are not met for the speed limit to be lowered as discussed below.

### *Discussion*

On its surface, Quail Rise is similar to a number of newer subdivisions in the district. It has an extensive footpath network – although in most cases only on one side of the road. People, including children, are therefore required to cross the road to access these footpaths. Although there are a number of green areas for children to play in, there are some disconnects within the subdivision so some children will have to walk a reasonable distance away from their home to play. Even so, this is still not as far as children in older suburbs have to walk to green areas.

Children also walk to and from the school bus stop on Ferry Hill Drive. Due to the layout of the footpaths this can mean they have to cross roads a number of times.

Speed Limit New Zealand, the guidelines for setting speed limits, indicates that speed limits less than 50 km/h should be used for roads where “motorized traffic and pedestrians or cyclists” use the same road area. That is, there is no room for vehicles to easily pass pedestrians or cyclists – they must share the road. Except at the end of cul-de-sacs, this is not the case in Quail Rise. Extensive works would also be needed to reduce speeds where current mean speeds are above 35 km/h to be able to propose a speed limit of 30 km/h. Finally, the guidelines require a calculated speed limit of 50 km/h before a lower speed limit can be implemented. Due to the wide open nature of Quail Rise, there are some areas where this requirement will be difficult to achieve.

Given these difficulties, justifying a lower speed limit through the requirements of Speed Limits New Zealand, and the likely precedence if the speed limit was lowered in this one subdivision, it is recommended that the speed limit remain unchanged.

### *Recommendation*

- Leave the speed limit across the Quail Rise sub-division unchanged at 50 km/h.

## **Queenstown CBD**

### *Background*

Speed limit reductions in the Queenstown CBD have been requested over a number of years but no changes have actually been made. One difficulty is the discussion around the extent of the changes and this is reflected in the requests for speed limit reductions in this latest round of consultation. Four submissions were received and each described a different area:

- all roads including Stanley St and Memorial St;
- the central area south of Shotover St;
- the one way system (the roads bounded by Camp St and Shotover St); and
- specifically Beach St from Camp St to Rees St and Rees St from Beach St to Church St.

### *Discussion*

A change in speed limits within the Queenstown CBD is currently one option that may address issues raised in the current transport strategy process. This work may also address the extent that any speed limit changes should cover – if a change is found to be needed. It is therefore recommended that no change to the speed limit over the Queenstown CBD is considered at this time.

### *Recommendation*

- Leave the speed limit unchanged over the Queenstown CBD at 50 km/h.

## **Arrowtown CBD**

### *Background*

The request for lower speed limits in Arrowtown's CBD relates to Ramshaw Lane and Buckingham Street between Berkshire Street and Wiltshire Street. The request is for speeds to be no more than 30 km/h as there is a high chance for pedestrians to be hit. However, the main thrust of the request was to close Buckingham St between 11am and 4pm to eliminate the danger.

### *Discussion*

At this stage it is not worth speed surveying Ramshaw Lane as various works are currently being completed that are likely to affect vehicle speeds. Once the work has been completed, and locals are used to the current layout, then vehicle speeds can be measured. Vehicles speeds are already low on Buckingham Street at peak times.

Crash data does not support the claim that these roads are dangerous for pedestrians. Since 2002 there has been only one minor injury crash on either road. In 2002, a pedestrian was hit after the vehicle started moving from a completely stopped position. There was also one crash on Buckingham Street when a dog ran in front of a vehicle.

The increase in pedestrian traffic that has prompted the request for a lower speed limit is likely to be reducing speeds given the greater activity.

### *Recommendation*

- Leave the speed limit unchanged at 50 km/h.

## **Cemetery Road**

### *Background*

The request to reduce the speed limit from the current 100 km/h applies to the section of Cemetery Road between Domain Road and Muir Road. Development has started to increase to the north of Cemetery Road to expand the Hawea urban area, but mainly on side roads. On the south side of Cemetery Road, these are a couple of houses at the Domain Road end, and a few farm gates.

Between Domain Road and Muir Road there is a footpath/cycle track that separates pedestrians and off road cyclists from traffic. There are some on-road cyclists but traffic is very light (around 320 per day) and with generally good visibility, they are easy to pass.

The road is straight and has great visibility for most of its length except for a slight crest that requires yellow lines to deter overtaking.

### *Speed Survey*

Speed surveys were carried out during a week in June 2014 between Muir Road and Gladstone Road. The average speed was 85 km/h and 15% of drivers were driving over 97 km/h. This is low for a typical 100 km/h speed limit and indicates that drivers recognize that they need to be driving slower through this area.

Over the week there were typically 318 vehicles per day.

### *Rating Survey*

The rating survey indicates a speed limit of 100 km/h for this stretch of road. The rating survey for the 800m between Muir Road and Grandview Road indicates a speed limit of 80 km/h.

### *Safe Speed*

The safety concerns for this stretch of road is side impact crashes as vehicles turn into and out of access, and on-road cyclists being clipped by passing vehicles. As speeds around 50 km/h are needed to ensure no serious injuries in side impact crashes, and 30 km/h if cyclists are hit. However, cyclists are likely to be going faster than 30 km/h themselves.

### *Discussion*

The safety concern raised along this section of road is that children in the new developments are in danger from speeding vehicles. Except for the school bus stops mentioned in the request, there appears to be no reason why children would be on Cemetery Road as there is a separate footpath for most of the length of the road. Given that drivers should slow to 20 km/h around stopped school buses, and children will only be crossing the road when being dropped off, then reducing the speed limit is unnecessary for this reason alone.

A speed limit of 80 km/h is possible for the 800m between Muir Road and Grandview Road as per the speed limits rule calculation process. However, it is a relatively short section and it will not be clear to drivers why they have to slow and some drivers may ignore the reduced speed limit making enforcement

necessary. There has only been 1 crash in the last five years along this 800m section where a driver failed to turn onto Cemetery Road from Muir Road and went straight ahead into a fence. It did not result in any injuries.

Along the full section being considered there was 1 fatal crash in 2014 where a driver lost control and rolled. This was well away from the residential streets.

It is recommended that the speed limit is not changed on Cemetery Road between Domain Road and Muir Road at this stage. If development begins on the south side of Cemetery Road then the speed limit should be reviewed again. Alternatively the 800m section between Grandview Road and Muir Road could have the speed limit reduced to 80 km/h, but it will not be clear to drivers why they need to slow down for such a short section.

#### *Options and Recommendation*

The recommended option is to:

- Leave the speed limit unchanged at the open road speed limit of 100 km/h.

The alternative option is:

- Propose a reduced speed limit of 80 km/h on Cemetery Road between Gladstone Road and Muir Road with the remainder of Cemetery Road remaining 100 km/h.

### **Centennial Avenue/McDonnell Road - rural**

#### *Background*

This is the rural route of Centennial Avenue and McDonnell Road between State Highway 6 (Arrow Junction) and the Arrowtown urban area. This is a rural arterial road with a 100 km/h speed limit, with the first part of the route on McDonnell Road and the second on Centennial Avenue.

#### *Previous review*

This section of road has been reviewed in 2012 and in 2013. After the 2012 review the Infrastructure Committee decided to retain the existing 100 km/h speed limit. The 2013 review lead the Infrastructure Committee to recommend that a change of speed limit to 80 km/h be proposed by Council for consultation. The principal difference between the reviews was that the NZTA changed the speed limit on the adjoining State Highway 6 to 80 km/h.

#### *Discussion*

The only change between the previous review and this review is that the Arrowtown Golf Club is now requesting a 70 km/h speed limit be considered past the golf club. This is principally due to the increasing number of golfers crossing the road – up to 4 times in one round of golf. Additionally, a number of tourist golfers are now using motorized golf buggies and may incorrectly look left and right when crossing the road. During the peak Saturdays during summer between 300 and 400 crossings of the road may occur.

Despite the increasing number of pedestrian crossings, a speed limit of 70 km/h would be completely out of context to the road environment for drivers. It is



therefore unlikely that a 70 km/h speed limit would be adhered to without intensive enforcement.

Given that a speed limit of 80 km/h is currently proposed for this section of road it is recommended that this proposed change continues to consultation. To increase the safety of golfers it would be more appropriate for the golf course to investigate and implement methods of increasing the visibility of golfers as they cross the road as this is more likely to make drivers more cautious of golfers than simply lowering the speed limit.

#### *Options and Recommendation*

The recommended option is to:

- Continue with the proposed reduction of the speed limit to 80 km/h on Centennial Avenue/McDonnell Road between State Highway 6 and Arrowsmith.

The other options are:

- Propose a reduction of the speed limit to 70 km/h on Centennial Avenue from the Arrowsmith township border to the end of the golf course. Continue with the proposed 80 km/h speed limit on the remaining section of Centennial Avenue/McDonnell Road to State Highway 6.
- Do not propose any changes to the speed limit.

#### **Kinloch Rd, Kinloch**

##### *Background*

Kinloch is a small holiday location with accommodation provided at the Kinloch Lodge, which also has a restaurant and bar and provides for other needs of campers staying at the DoC camping ground on the other side of Kinloch Road. The owner of the lodge is concerned that vehicles are not travelling slow enough given the pedestrians, including unattended children, crossing the road from the campground to the Lodge.

##### *Previous Review*

A summer holiday speed limit of 30 km/h on Kinloch Rd through Kinloch for the period 20 December through to 10 February is currently proposed for the location. A temporary speed limit was also trialed last summer with no issues. The request is to extend the proposed holiday speed limit to cover the whole year.

##### *Discussion*

The proposed summer holiday speed limit just meets the Speed Limit New Zealand requirements to be implemented. However, this section of road does not rate a 50 km/h speed limit and so a permanent speed limit less than 50 km/h is not possible.

Additionally, reducing the speed limit for the whole year is likely to dilute its effectiveness for the more important summer period as regular users will have periods of time where there is no apparent reason to slow down and increase their speeds, but then not decrease their speeds when activity in the area increases.

*Recommendation*

- Continue the speed limit setting process with the proposed 30 km/h summer speed limit

**Arrowtown Lake-Hayes Road (including Butel Road) - rural**

The section of Arrowtown-Lake Hayes Road that is currently 100 km/h has been reviewed previously and the current proposal is to reduce the speed limit to 80 km/h. This is the suggested speed limit reduction so no further investigation is needed.

*Recommendation*

- Continue the speed limit setting process with the proposed 80 km/h speed limit.

## ***Appendix 1: Maps showing investigated sites***

### **Arthurs Point Road/Gorge Road**



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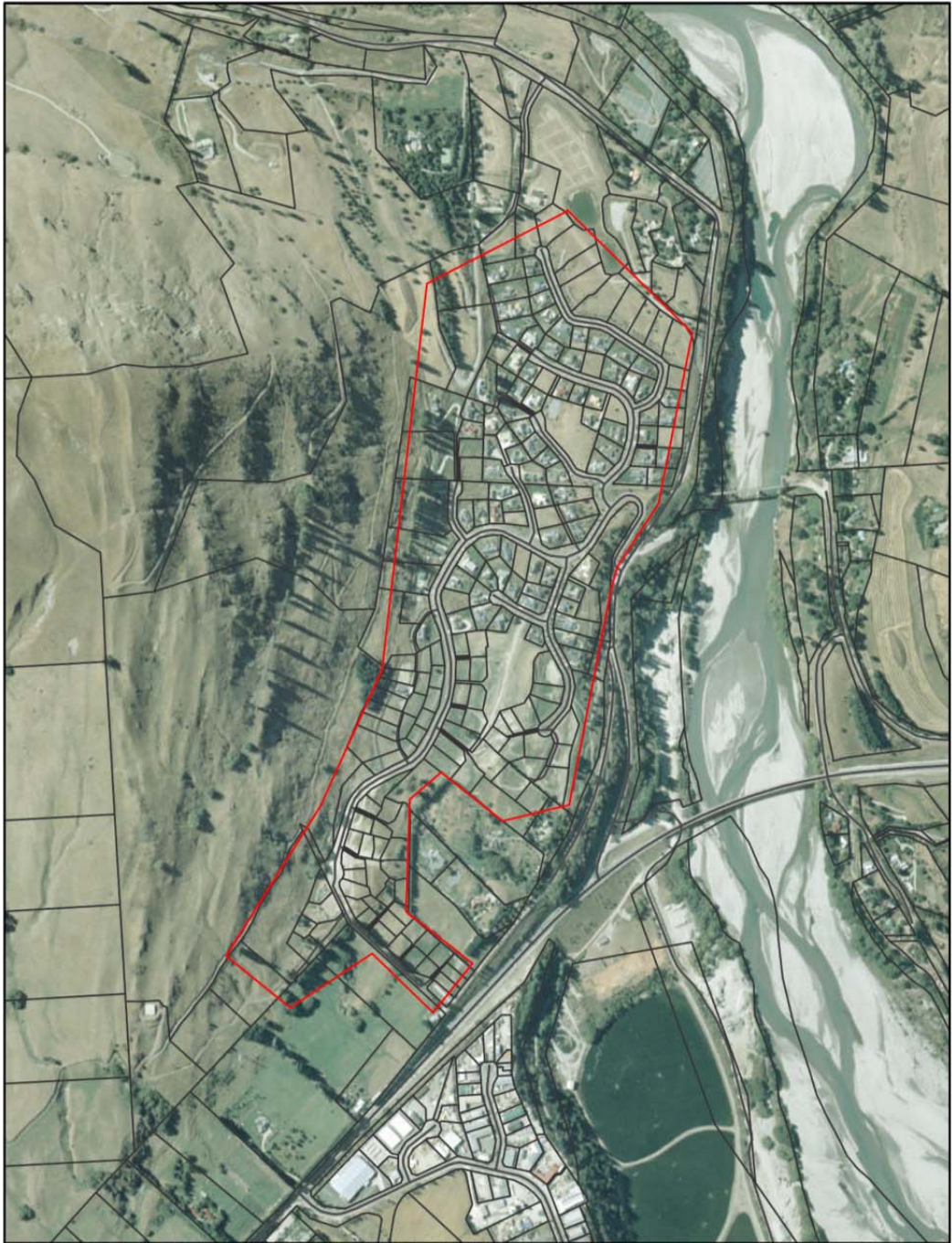
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Map produced by Queenstown Lakes District Council's Dekho GIS viewer

Map date:  
28/11/2014






Quail Rise



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LAKES DISTRICT  
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## Queenstown CBD

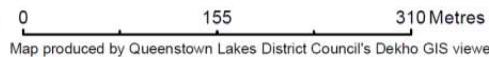


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QUEENSTOWN  
LAKES DISTRICT  
COUNCIL

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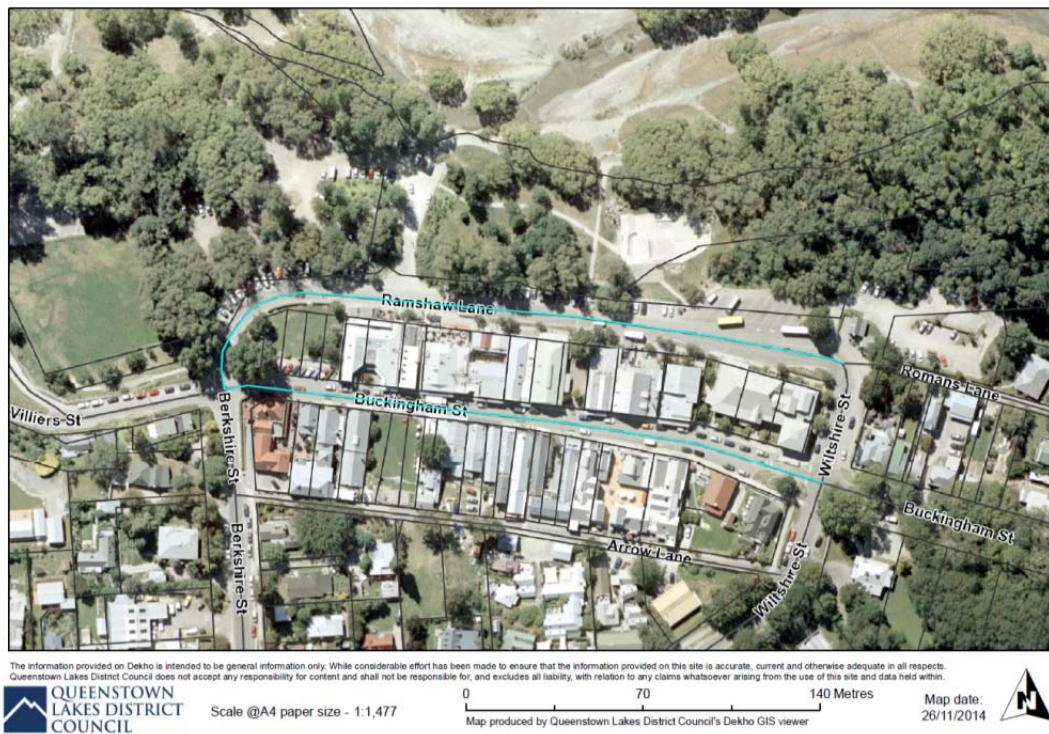


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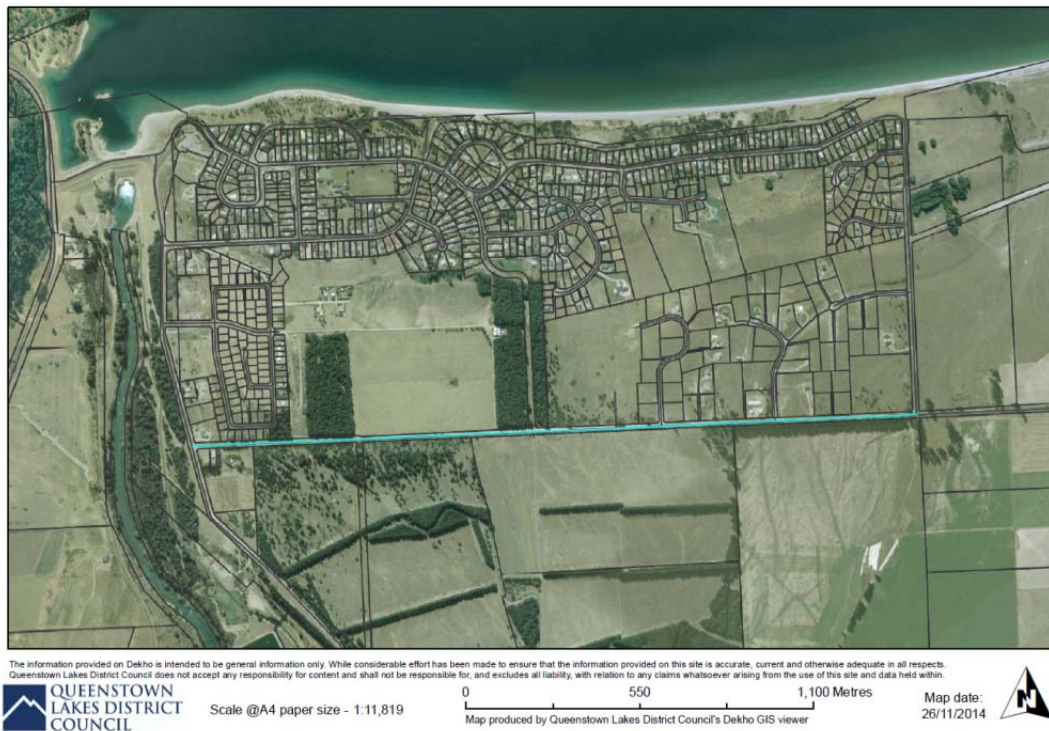




## Arrowtown CBD



## Cemetery Road





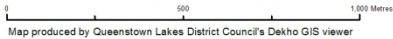
**Centennial Avenue and McDonnell Road**



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Map date:  
2/04/2012



Kinloch Road



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Map date: 20/02/2013



## Arrowtown-Lake Hayes Road (including Butel Road)



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Map date:  
2/04/2012





## Arrowtown School Zone



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Map date:  
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