

# MOORINGS



Information on construction and maintenance



QUEENSTOWN  
LAKES DISTRICT  
COUNCIL

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# CONTENTS

Swing moorings/Pile moorings	2	Figure 2 - Standard 1 Tonne Mooring Block	10
Mooring design (Figure 1)	3	Figure 3 - Standard 2 tonne mooring block	11
Mooring specifications	3	Skipper Responsibility	12
Swing mooring maintenance and inspection	6	Tips about Boating Safety	13
Siting of moorings and considerations	7		
Permits and conditions	8		
Transfer of ownership	8		
Fees and charges	9		
Mooring buoys	9		
Address update	9		

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# SWING MOORINGS

Queenstown Lakes District Council (QLDC) have regulatory responsibilities for the control of aspects of moorings. This booklet is to assist mooring owners to identify appropriate construction and maintenance specifications necessary within the Queenstown Lakes District.

# SWING MOORING DESIGN

The minimum mooring block size is 1000kg, this will accommodate most boats with a strong anchor chain. However, for larger vessels (over 12m) the mooring block may need to be increased to 2000kg. Please speak with our Harbourmaster for advice for vessels over 12 meters.

**TABLE 1 MOORING SPECIFICATIONS** See Figure 1

VESSEL	MOORING					
	A		B	C		D
Vessel length overall (metres)	Mooring block air weight (tonnes <sup>1</sup> )		Shackle	Ground chain		Shackle or ring
			Min bar size diameter (mm)	L	Diameter (mm)	Diameter (mm)
12	1		32	Min of 6m	Min of 20	Min of 16
Over 12	Speak with QLDC Harbourmaster for advice on a case by case basis.					
	E		F	G		H
Vessel length overall (metres)	Intermediate chain		Swivel	Top chain or rope		Buoy rope
	L	Diameter (mm)	Diameter (mm)	L	Diameter (mm)	
12	Depth of mooring plus 3m	12	20	To suit vessel min 2.5m	12mm chain or rope of equivalent strength	15mm synthetic rope
Over 12m		16	25			

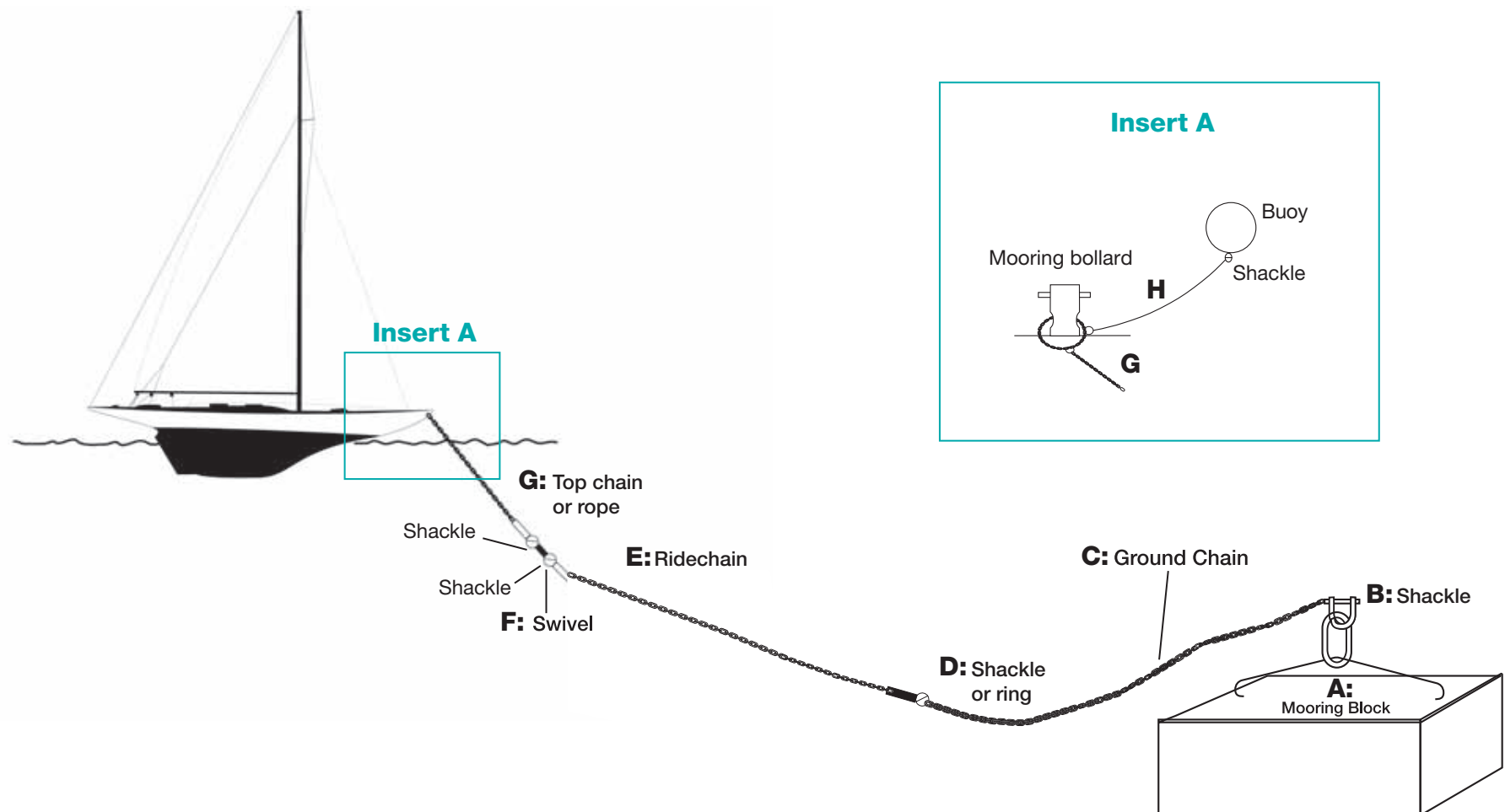
<sup>1</sup> Mooring blocks to be embedded in the lakebed to ensure that the full passive earth pressure resistance is developed (where possible).

<sup>2</sup> Minimum factor of safety against quasi-static mooring force for the mooring block is 3.

<sup>3</sup> Overall chain length = G + E + C (Ground chain + Intermediate chain + Top chain.)



**FIGURE 1**  
**MOORING SYSTEM**



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# MOORING SPECIFICATIONS

There are a number of aspects of a moorings design that influence the mooring effectiveness:

- > the design of the mooring block,
- > length or weight of the ground chain,
- > embedding the mooring block into the lakebed

To get the best result, the block needs to expel air and liquid as it enters the lakebed. To ensure the block is secure, the block may need to be jetted or 'airlifted' in. Liquid silts will soon fill the space adjacent to its sloping sides, effectively keying the block into the lakebed. This situation increases holding, and decreases the block profile.

The sloping sides of the block will:

- > Help embed the mooring into the lakebed,
- > Reduce the chance of snagging, and
- > Assist the block to rotate in conditions where the ground chain tension is very high. This will cause the block to dig in (like the flukes of an anchor) and increase its sectional area in the direction of the load.

A depression in the centre of the block will also stop snagging occurring, and should reduce wear on the ring and principal shackle by restricting movement.

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# SWING MOORING MAINTENANCE AND INSPECTION

The safety of a mooring is the responsibility of the registered mooring owner. The whole system must be inspected every two years to remove kinks and replace worn components.

When a vessel is riding on a mooring, a 'safety pin' or clamp should be used to prevent the mooring chain or rope jumping out of the bow fairlead. Regular checks should be made around the bow fairlead as chafing and wear regularly show up in this area.

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# SITING OF SWING MOORINGS

In assessing a resource consent application for a swing mooring, QLDC considers the effects of the mooring on the environment, including effects on navigation and safety. The resource consent applicant needs to ensure that the site for the swing mooring is within the permitted mooring zones.

Once a resource consent is granted, please submit your plan and application form to [queenstown@aplproperty.co.nz](mailto:queenstown@aplproperty.co.nz)

Once the block has been laid QLDC:

- > May investigate any mooring site that has been left vacant for an extended period, when no inspection report has been filed and/or no current address for the mooring owner is available.
- > QLDC is not responsible for the security of any mooring or any damage or loss that may occur that is related to the Mooring System.

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# PERMITS AND CONDITIONS

There are a number of permits and application forms you may require:

- Conditions of Mooring Permit
- Conditions of Structure Permit
- Mooring/jetty permit application form
- Mooring/jetty permit transfer form

Information about current permits and conditions can be found on the QLDC website - visit [www.qldc.govt.nz/boat-ramp-fees/](http://www.qldc.govt.nz/boat-ramp-fees/)

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# TRANSFER OF OWNERSHIP

If you want to sell a mooring, please use the Mooring Transfer of Ownership form available from [www.qldc.govt.nz](http://www.qldc.govt.nz)

This form must be completed by the previous and new owners before submitting the application.

The following requirements must be met:

- (1) the mooring must have been satisfactorily inspected within the 12 months and QLDC advised of the inspection,
- (2) the buoy must be correctly numbered, displayed, and
- (3) the registration fee must be paid.



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# FEES & CHARGES

If an owner does not undertake an inspection of their mooring site as required, or is otherwise non-compliant, they may incur charges for inspection, removal of the mooring system or the mooring sold by QLDC.

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# MOORING BUOY

The mooring buoy must be a bright colour and a minimum of 400mm diameter. The swing mooring number must be engraved/written on top in lettering not less than 60mm high and painted in a contrasting colour.



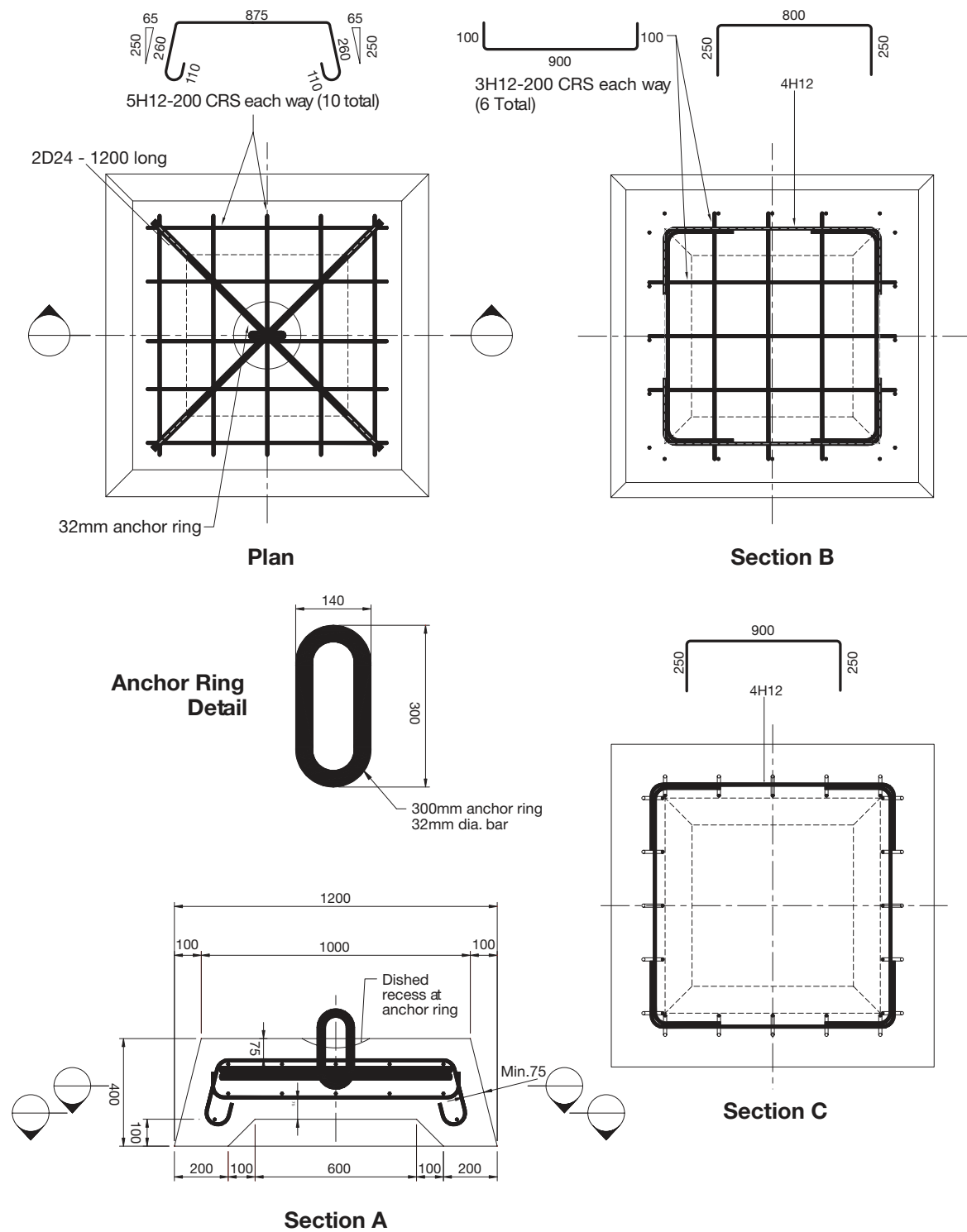
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# ADDRESS UPDATE

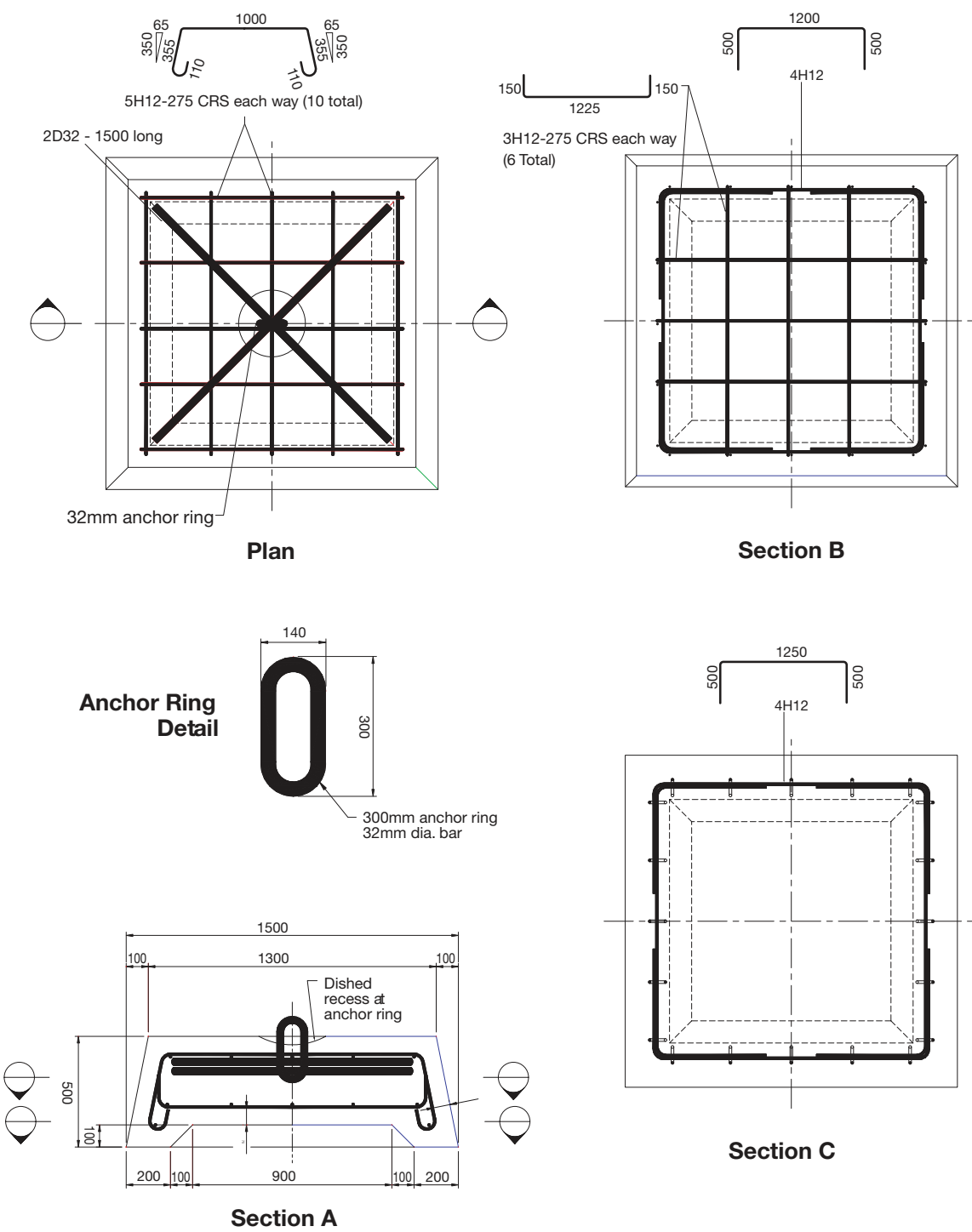
Mooring owners must notify QLDC of any change of address.

Please email [services@qldc.govt.nz](mailto:services@qldc.govt.nz) and include your new details and mooring number.

**FIGURE 2**  
**STANDARD 1 TONNE MOORING BLOCK**















**FIGURE 3**  
**STANDARD 2 TONNE MOORING BLOCK**



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# SKIPPER RESPONSIBILITY

I'm a responsible Skipper who will ensure:

-  I have the necessary skill, knowledge and qualifications to safeguard all on board
-  My vessel and all its equipment are properly maintained
-  My vessel carries all the necessary safety equipment
-  We have a minimum of two means of communication: *i.e VHF marine radio, cellphone, flares*
-  Each passenger has a correctly fitted buoyancy aid
-  My passengers are briefed on the location and use of all safety equipment
-  The weather conditions and outlook are suitable for the trip planned
-  I always comply with the Maritime 'rules of the road'
-  My vessel is loaded within its limits and all equipment is securely stowed
-  Someone ashore knows where we are going and when we'll be back
-  Check for weed on vessel, motor and trailer and clean off as necessary
-  All boats on a mooring are recommend to have a solar or wind turbine fitted to ensure the charging of the battery for the bilge pump



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# TIPS ABOUT BOATING SAFETY

1

Check the boat, engine, and equipment before leaving

2

Check the weather forecast and tides before leaving

3

Tell someone where you're going, and when you'll be returning

4

Know the: Collision Prevention Rules, Water Recreation Rules and local bylaws

5

Never overload the boat

6

Take a proper lifejacket for each person on board; wear them

7

Have aboard: Anchor, bailer, spare fuel, torch and warm gear

8




Guard against fire

9

Avoid alcohol when boating

10

Take two means of communication: *VHF, Flares, EPIRB, cellphone in a plastic bag*

**QUEENSTOWN OFFICE** Civic Centre,  
10 Gorge Road  
Private Bag 50072,  
Queenstown 03 441 0499**WANAKA OFFICE** 47 Ardmore Street,  
Wanaka 03 443 0024[services@qldc.govt.nz](mailto:services@qldc.govt.nz)[www.qldc.govt.nz](http://www.qldc.govt.nz)[twitter.com/QueenstownLakes](https://twitter.com/QueenstownLakes)[facebook.com/QLDCinfo](https://facebook.com/QLDCinfo)