
In, out, and around Queenstown

Abbreviations

Note: Throughout this booklet all altitudes are above mean sea level (AMSL) unless otherwise stated.

AC	Advisory Circular
AD	Aerodrome section of <i>AIP New Zealand</i>
AFIS	Aerodrome flight information service
AGL	Above ground level
AIP	Aeronautical Information Publication
ALT	Altitude (setting on transponder)
AMSL	Above mean sea level
ATC	Air traffic control
CFZ	Common frequency zone
CTA	Control area
CTR	Control zone
DME	Distance measuring equipment
ENR	En-route section of <i>AIP New Zealand</i>
FISCOM	Flight information service communications
FL	Flight level
GAA	General aviation area
GAP	Good Aviation Practice (booklet)

GNSS	Global Navigation Satellite System
IFR	Instrument flight rules
MBZ	Mandatory broadcast zone
MHz	Megahertz
NM	Nautical mile
NORDO	Non radio-equipped
PBN	Performance based navigation
PLA	Parachute landing area
QNH	A sub-scale setting which causes an altimeter to read altitude above mean sea level
RNAV	Area navigation
RNP	Required navigation performance
SARTIME	Search and rescue time
TM	Transponder mandatory
VFR	Visual flight rules
VNC	Visual navigation chart
VOR	VHF omnidirectional radio range
VPC	Visual planning chart
VRP	Visual reporting point (VRP names are bolded except over photos)

Radio phraseology

Radio calls that are clear, concise, consistent, and correct are essential to good communication. We recommend that you study Advisory Circular AC91-9-AC172-1 *Radiotelephony Manual*. The AC contains examples of standard radiotelephony phraseology for use by pilots and air traffic services. See also the GAP booklet *Plane talking*.

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Cover photo: Runway 05 threshold Queenstown aerodrome from Frankton Arm, looking toward Crown Terrace. Photo: Michael Thomas.

See the CAA website for civil aviation rules, advisory circulars, airworthiness directives, forms, and more safety publications. Visit aviation.govt.nz.

Every effort is made to ensure the information in this booklet is accurate and up-to-date at the time of publishing, but numerous changes can occur with time, especially in regard to airspace and legislation. Readers are reminded to obtain appropriate up-to-date information.

All photos in this booklet are CAA images unless otherwise stated.

Introduction

Queenstown serves as a gateway to some of New Zealand's most renowned scenery and tourist experiences. As you can imagine, flying into an aerodrome enveloped by nature presents specific challenges. The mountainous terrain, changeable weather, and high-density traffic make it one of the more demanding destinations to fly into.



Queenstown airspace accommodates a variety of flying activities, including scheduled airline traffic, aeroplanes and helicopters on scenic flights, or those ferrying tourists to adventure activities. There are also balloons, hang gliders, paragliders, and parachutes.

This booklet gives planning advice and pointers that pilots need to consider. It's not a definitive guide, and should be studied in conjunction with *AIP New Zealand*, including the Visual Navigation Charts (VNCs) – particularly VNC C10.

Too many pilots venture into mountainous areas without preparing themselves properly. Before flying into Queenstown, you should have a good understanding of basic mountain flying techniques and density-altitude considerations. Make sure you're aware of the nuances and pitfalls. For example, prior experience of the illusions caused by flying without a horizon could save your life. Also, be aware of wind flow patterns in mountainous terrain and rapidly changing weather conditions. (See the GAP booklets *Mountain flying* and *VFR MET*).



Mount Earnslaw

Mount Alfred
Glenorchy

Pig Island

Rat Point

Airspace overview

Queenstown VNC C10 shows that the aerodrome is almost completely surrounded by high terrain. The most logical routes into Queenstown are via the lower terrain of river valleys, or along Lake Wakatipu. These natural low-level routes each have visual reporting points (VRPs) along them.

To avoid becoming disorientated when using the charts, note the orientation of the main features, and use the cardinal grid lines on the charts to confirm direction. For example, the Kawarau Gorge runs east-west, and the Remarkables Range runs north-south.

Operations in transponder-mandatory (ADS-B) airspace can be carried out without an active transponder, only if you have a valid reason, and you have specific authorisation from air traffic control (ATC). Valid reasons may include transponder failure in flight, or flight to a maintenance facility to have a transponder repaired or installed.

Control zone

The Queenstown control zone (CTR) is Class C airspace, extending from the surface to 7500 feet. In Class C airspace, ATC will provide clearances and instructions to separate VFR traffic from IFR traffic.

VFR traffic is not separated from other VFR traffic, but it is segregated and sequenced in the vicinity of the aerodrome.

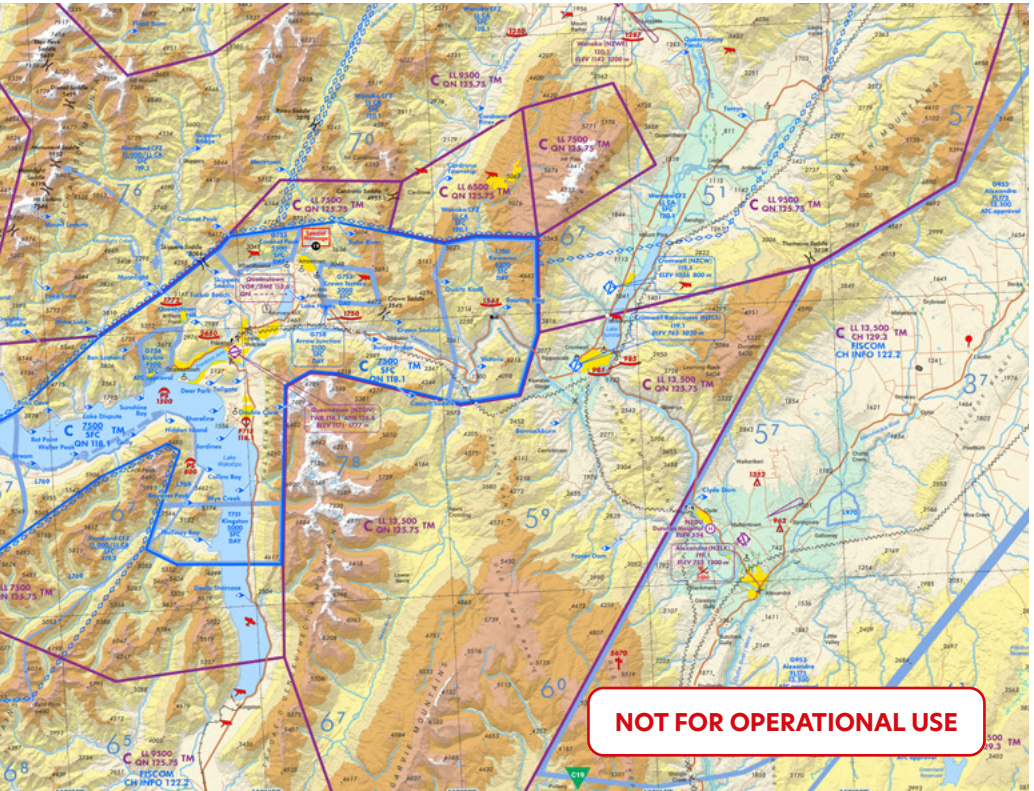


Traffic information will be provided to VFR flights for traffic avoidance.

The upper limit of Queenstown's CTR is higher than most other control zones, as the aerodrome elevation is close to 1200 feet, with high terrain surrounding the immediate area. The control zone is an irregular shape covering the entire Wakatipu Basin. It extends to 11 NM southwest of **Rat Point**, east to within 3 NM of Cromwell, and to about 4 NM south of **Wye Creek**.

The outer extremities of the CTR include three VFR transit lanes:

- T753 Ridge Peak, (surface to 4000 feet); essentially that part of the CTR to the south-west of **Rat Point**



- T750 Kawarau, (surface to 4500 feet); the eastern 5 NM, on average, of the CTR
- T751 Kingston, (surface to 5000 feet); the southern 3.5 NM of the CTR.

The unusual shape is dictated by the terrain and the need to accommodate the close-tolerance, RNP approaches flown by airline jet traffic to the main runway, 05/23.

There are four general aviation areas (GAAs) within the CTR. When active, a GAA becomes Class G uncontrolled airspace during daylight hours.

G756 Skyline (surface to 4500 feet) can only be operated in with specific ATC approval. Flights must remain clear of G756, which has intensive paraglider activity, and some

hang glider activity, from the peak above Queenstown (where the Skyline gondola operates) to the city below.

G755 Coronet Peak (surface to 5500 feet) is permanently active during daylight hours. It has hang gliding, paragliding, light aircraft, and intensive helicopter activity (the latter also to the northwest of **Coronet Peak**).

Caution: Part of the circuit for large aircraft is very close to the southern boundary of G755. It is absolutely imperative that traffic within the GAA does not cross Malaghans Road without an ATC clearance. Malaghans Road runs from Arthur's Point to Arrowtown, and forms part of the southern boundary of G755. There have been problems with visiting paragliders straying out of G755.

G752 Crown Terrace (surface to 3000 feet) and G758 Arrow Junction (surface to 2100 feet) are active during daylight hours. These are used for hang gliding and paragliding operations.

Pilots approaching from Arrow Junction/Bungy Bridge areas should keep a special lookout for paragliders in close proximity to aircraft in this area.

When operating in any of these four GAAs, maintain a careful lookout. Remember that paragliders are unlikely to make radio calls. Most of the activities in these areas are adventure, dual, or tandem operations.

Caution is required when entering the CTR from the south, or leaving it to the south. There is an airstrip at **Jardines** that is used for parachuting operations up to approximately 16,000 feet, which is within the Jardine's parachute landing area of the CTR. Flight training operations are often carried out in this general area, and in the southern arm of the lake. There is an aerodrome outside the CTR at Kingston where light aircraft may be operating.

Control areas

All control areas (CTAs) surrounding Queenstown are Class C, with an upper limit of FL175. The lower limits vary from 6500 feet to 13,500 feet, the lowest being a sector to the northeast of the CTR boundary, in the Cardrona area. These are overlaid by three Class C CTAs extending from FL175 to FL600. In most areas, except to the southeast of Queenstown, the lower limit of the CTA is only 1000 to 1500 feet higher than the mountain ranges. It is possible to follow the valley systems to the edge of the CTR without a clearance, but if a direct-line track over the ranges is flown into Queenstown, a clearance into the CTAs is likely to be required. Study the VNC C10 or the 1:125 000 VNC D3 charts, and the South Island visual planning chart (VPC) to see the full extent of the CTAs.

Common frequency zones

Common frequency zones (CFZs) have been established to encourage pilots to use a single VHF frequency within each CFZ. Pilots should transmit their position in relation to VRPs or prominent features, together with altitude and intentions, on entry, or at other times for traffic safety. Procedures established in these areas are to enhance safety for all pilots, not just those involved in the busy tourist traffic.

The Fiordland CFZ (119.2 MHz) extends north, west, and southwest of the Queenstown CTR through to seaward of Milford Sound. Vertical limits are from the surface to 11,000 feet, or to the lower limit of controlled airspace, whichever is the lower.

Wānaka CFZ (120.1 MHz) shares a common boundary with the Fiordland CFZ, from **Coronet Peak** to the Minaret Burn Mouth (Lake Wānaka) and extends to the northeast of the Queenstown CTR, as far as Lindis Pass. Its vertical limits are the surface to the lower limit of controlled airspace. Exercise caution around the Macetown and Motatapu Valley areas as one side of the Motatapu River is 119.2 MHz and the other side is 120.1 MHz. If you have two radios, it's advisable to monitor both, for situational awareness.

Itinerant pilots should be aware that if they're planning a flight to Milford Sound, they will be entering the Milford Sound CFZ (118.2 MHz). There is an AFIS at Milford Sound aerodrome, and it also operates on 118.2 MHz. See AC91-9-AC172-1 *Radiotelephony Manual* or the GAP booklet *Plane talking* for specific phraseology associated with an aerodrome flight information service. See also the GAP booklet *In, out, and around Milford*.

Preflight preparation

Thorough preflight planning is advised. Before the trip, study all relevant charts and other information, even if you've made the trip before – a refresher every time is good airmanship. The South Island VPC (A2) is useful for cross-country flight planning.

Carefully study the Queenstown pages in the Aerodrome (AD) section of *AIP New Zealand*.

Study the “Legend” panel on the VNCs, to be sure you understand the depictions of various types of airspace. Become familiar with airspace boundaries and VRPs before needing to refer to them in a busy cockpit. Study the terrain and likely routes. A useful preflight tool for getting a general feel for the terrain is a virtual flight in Google Earth, in the 3D mode.

Closely studying all the VRPs will help your situational awareness when entering the busy area around Queenstown. It's often difficult to build an accurate mental picture of where other aircraft are when their position reports give names and places unfamiliar to you. The terrain means that you'll also be kept busy navigating, maintaining terrain clearance, and keeping a good lookout for other traffic.

Before the trip, study all relevant charts and other information, even if you've made the trip before.



Photo courtesy of Aeropath.

Communications

The Queenstown flight information service frequency is noted on the VNCs. The expected coverage is shown on the South Island FISCOP chart in *AIP New Zealand*, Vols 1, 2, and 4. Within this area below 9500 feet, outside controlled airspace, communicate with Queenstown Information on 128.9 MHz.

Aerodrome information (runway in use, weather conditions and QNH) can be obtained from the ATIS (126.4 MHz).

When in the Fiordland CFZ you should be monitoring 119.2 MHz. If you have two radios you can monitor both 119.2 MHz and 128.9 MHz, otherwise change briefly if you need to talk to Queenstown Information.

When Queenstown is off watch, the Queenstown flight information sector on the FISCOP chart is covered by Christchurch Information on 122.2 MHz, and coverage extends to ground level at Queenstown. Refer to the latest *AIP Supplements* for the hours of service – be aware that airline night operations mean the tower is often staffed at night. The unattended aerodrome frequency is 118.1 MHz.



Contact Queenstown Information on 128.9 MHz on flight information sector entry and report your position, intentions (for example, if joining Queenstown, what entry point you intend to use), and receipt of the ATIS. It will provide any additional information and known traffic information. Early contact with Queenstown Information helps facilitate an efficient traffic flow, as the tower controller will be forewarned of your arrival. This will mean less likelihood of delay, or holding, in your joining clearance when you contact the tower. For helicopters, on your initial call to Queenstown Information, it's important to advise your intended destination on the aerodrome.

Before entering the Queenstown CTR, call Queenstown Tower on 118.1 MHz and give an abbreviated position report of aircraft call sign, position relative to a VRP, and

altitude. Before entering Queenstown CTA, request a clearance from Queenstown Approach on 125.75 MHz.

Always have your transponder set to ALT. Not only will this assist ACAS-equipped aircraft, but also Queenstown ATC. Your transponder must be ADS-B compliant in controlled airspace.

In the event of a communications failure outside the CTR, remain clear and proceed to an alternate aerodrome, then report your arrival to Queenstown Tower. Inside the CTR, follow the assigned arrival procedure and carry out a standard overhead join and expect light signals. If departing, vacate the zone via the assigned departure procedure. Refer to *AIP New Zealand* ENR 1.15 for a full description of communication failure procedures.

Deer Park



Looking south-east. Remarkables on the left, Deer Park VRP on right.

Departing aircraft should listen to the ATIS and then call Queenstown Delivery on 121.9 MHz for departure instructions. These will normally be in accordance with the procedures listed in *A/IPNZ NZQN AD 2 - 64.2, VFR Departures*. For helicopters, on your initial call to Queenstown Delivery, it's important to advise them of your location on the aerodrome, eg, southern apron.

If you require a specific departure, or one that includes something other than published, make that request on first contact with Queenstown Delivery. If you don't understand a clearance, or feel that you'll be unable to comply (for example, because of inadequate climb performance), don't be afraid to speak up, so an alternative can be arranged. When ready to taxi, call Queenstown Tower for taxi clearance.

RTF coverage

VHF communication is dependent on line of sight. Tower frequency (118.1 MHz) repeaters are located on Queenstown Tower, Coronet Peak, Mount Nicholas, Cardrona, and Mount Difficulty; 128.9 MHz repeaters on Mount Maude (near Wānaka), Obelisk, and Coronet Peak; and the ATIS transmitters are on Coronet Peak and the tower. Expect effective communication when you have line of sight to the top of any of these features.

Because of the terrain, there are some RTF 'holes'. If you can't raise the tower on 118.1 MHz, try Queenstown Information on 128.9 MHz. The two radio positions sit next to each other in the tower.

Terrain interference also means that you may not hear the radio calls of other aircraft in your vicinity. Do not assume there is no traffic near you, just because you haven't heard any radio calls.

In Te Anau basin, reception of Queenstown Information is variable. Don't rely on it below 8000 feet. If you need to amend your SARTIME, do this before descending too low. You'll need to phone to terminate your flight plan after landing.

Toll Gate (bottom of Remarkables ski field road between Tower and Remarkables).

Photo courtesy of Jess Klitscher.





Arrival procedures

See AIPNZ NZQN AD 2 – 35.1 to 2.35.4 for the most up-to-date information. Note: landing lights should be used when below 6000 feet within 10 NM of Queenstown.

From the north-east and east

Aircraft arriving from northern parts of the South Island have two likely inbound routes, the Cardrona Valley and the Kawarau Gorge. Standard zone entry points and maximum altitudes are **Soho River** (6500 feet) and **Victoria** (4500 feet).

Cardrona Valley

From **Cardrona Township**, you have two route options: Cardrona Saddle and **Soho River**; or **Crown Saddle**.

A potential cause of incidents at Queenstown is when pilots misidentify Cardrona Saddle and **Crown Saddle**. Saying you'll join via Cardrona Saddle and then turning up at **Crown Saddle** can cause major problems.

Crown Saddle

Cardrona township

Approaching Cardrona township from Wānaka.

Separation from IFR traffic is easily compromised at the **Crown Saddle**, because the IFR approach from Runway 23 lies immediately south of it (within 1NM).

Look carefully at VNC C10. When following the Cardrona Valley Road, you'll see a zigzag road to your right (west) leading up to Cardrona ski field, and another to the left (east) leading up to the Snow Farm ski area on the Pisa Range. **Cardrona Township** is about a mile south of the junction of the ski field roads and Cardrona Valley Road.

The lower terrain of the Cardrona Saddle is to the south of the ski field, or to your left as you face the ski field. You must turn right out of the Cardrona Valley to cross the saddle. From the Cardrona Saddle you can't see Queenstown.

The **Crown Saddle** is further on up the Cardrona Valley where the valley narrows to its head – the road climbs and crosses through the Saddle.

Joining from the east is possible via **Victoria** and the Gibbston Valley. Contact Queenstown Information on 128.9 MHz approaching **Victoria** 4500 feet or below. Expect zone entry either via the Gibbston arrival as depicted in *AIPNZ* (enter to the Gibbston Tavern 2800 feet or below). This is to separate VFR traffic below the IFR approach for Runway 23. Depending on the traffic, you may be required to hold east of the Gibbston Tavern 2800 feet or below. Alternatively, if there is no IFR traffic around, zone entry will be to **Bungy Bridge** and then onwards circuit joining instructions.



Cardrona Saddle

Cardrona ski field

Cardrona Saddle

On a good day, aircraft arriving from Lindis Pass or Wānaka are likely to approach over the Cardrona Saddle. When inbound, stay closer to the ski field.

Although you'll be clear of controlled airspace up to 6500 feet when north of Cardrona Saddle, it's wise to cross between 5500 and 6000 feet (giving you 500 to 1000 feet clearance from the Saddle). Otherwise, it can be difficult to lose the excess height before reaching Queenstown.

Airline aircraft sometimes make a visual approach via Cardrona Saddle, so you may see this traffic not far above you.

Report at or approaching **Cardrona Township** before entering the CTR.

Cardrona Saddle is just outside the CTR, so it's advisable to get ATC clearance after crossing the Cardrona Saddle but before reaching **Soho**.

Looking towards Arrowtown from Deer Park.



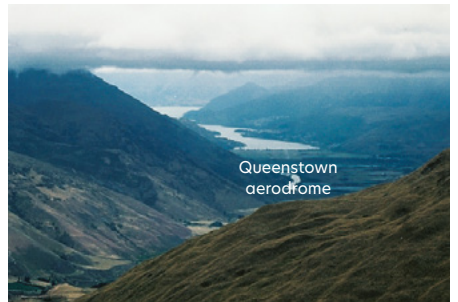
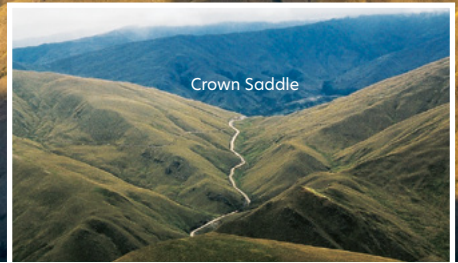


Looking toward Queenstown Airport.

Crown Saddle

In strong north-west or westerly conditions, there will be turbulence in the lee of Mount Cardrona. In these conditions, it's better to join via **Crown Saddle** at the head of the Cardrona Valley.

Note that **Crown Saddle** is well inside the CTR, so make sure you receive an ATC clearance in plenty of time. Part of the clearance will usually include a requirement to call at **Crown Saddle**. Crossing at 4000 to 4500 feet allows at least 500 feet terrain clearance, although it may appear less. If you're unfamiliar with the area, however, you may not feel comfortable with this margin above the terrain, and it may be better to approach at 5000 feet. Approaching on the left side will



From Crown Saddle looking toward Queenstown aerodrome.

give a better view of anticipated features ahead. After crossing the saddle, start to descend immediately at an appropriate rate to ensure you lose excess height before reaching Queenstown, particularly if joining straight in on Runway 23.



Looking toward Victoria from Roaring Meg, with Nevis Valley in the background.

Roaring Meg

If the Cardrona and **Crown Saddle** are closed, the best option is to return down the Cardrona Valley and re-route via the Kawarau Gorge.

Unless you're very familiar with the area, routing via the **Roaring Meg** power station from Cardrona Valley is not a good option, as you need to remain close to higher terrain for a longer period than the other saddles. The saddle out of Cardrona Valley down into **Roaring Meg** is less well-defined, as it's only a shallow dip in the surrounding terrain. Navigation is not as easy, and it's more difficult to pinpoint your position until you reach Kawarau Gorge. If you do route via **Roaring Meg** from the Cardrona Valley, the lower limit of controlled airspace is 6500 feet to the north of T750, and 4500 feet within T750.

Low-level from Wānaka

The other likely inbound route from Wānaka and the northeast, the Kawarau Gorge, is used particularly when cloud ceilings are low.

Call Queenstown Information on 128.9 MHz at the southern end of Lake Dunstan. Radio reception is better on the eastern side of the lake than at Cromwell Racecourse when at a low altitude.

Queenstown Information may inform you to expect the Gibbston Arrival, which may result in an earlier descent due to the requirement to enter controlled airspace 2800 feet or below. This expectation of a Gibbston arrival is not a clearance into controlled airspace – this will be issued by Queenstown Tower on 118.1 MHz.

As reception on the information frequency may be patchy along this route at low level, it is advisable to communicate while still in the Wānaka or Tarras area. There's a 128.9 MHz transceiver on Mount Maude, next to Wānaka aerodrome, where reception is available at ground level.

Reporting points along the Kawarau Gorge are **Roaring Meg** and **Victoria**, (both within T750) and **Bungy Bridge**. It's important to keep to the right side of the valley. Remember, if a clearance isn't available, you must remain outside the control zone.

The Kawarau transit lane (T750, surface to 4500 feet) is a useful buffer that will allow you to proceed as far as **Victoria**, with enough room to turn around or orbit if you haven't received a clearance. There should be no communication problems with Queenstown Tower from **Victoria** onwards. Watch for occasional hang glider and paraglider traffic in T750.



Gibbston Valley from Victoria.

The Kawarau Gorge route can be transited as low as 2500 feet, but by **Bungy Bridge** the valley becomes quite confined at that altitude. Most pilots will need at least 3000 feet to feel comfortable.

The higher you are, the more room there is to manoeuvre, and the easier it is to see ahead. Also, communication with the tower will be possible from further out at higher altitudes.



Lake Dunstan towards Cromwell and Cromwell Racecourse.

Bungy Bridge

Bungy Bridge is at the eastern end of the Wakatipu Basin. You'll actually see two bridges very close together; one is a road bridge and the other is **Bungy Bridge**. You may be asked to report at the bridge for joining instructions or sequencing.

Normally, you'll be instructed to join direct from **Bungy Bridge** or via **Lake Hayes**, depending on traffic. If you have to make an orbit at **Bungy Bridge** (left would be normal, having kept to the right-hand side of the valley), this should be quite comfortable unless you're lower than necessary - but you can return to a wider part of the valley to hold.

At extremely busy times, such as before a Warbirds Over Wānaka airshow, when there may be several aircraft holding in the area, common sense should prevail.

Fly a left-holding pattern wide enough to accommodate the number of aircraft holding.

Alternative low-level from Wānaka

A low-level route from **Glendhu Bay** leads up the Motatapu River and then down the Soho River. Flight at 3500 feet allows 500 feet terrain clearance at the highest point. There should be satisfactory communication with Queenstown Tower on 118.1 MHz at low level once you sight **Soho River** VRP ahead.

Queenstown Basin from Bungy Bridge.



From the south

Aircraft arriving from the south (eg, the Invercargill, Mandeville, or Gore areas) are likely to approach via the southern arm of Lake Wakatipu. On this route, you'll enter the Queenstown Flight Information area at Kingston. Give a position report to Queenstown Information at Kingston, or at the latest, **Devils Staircase** VRP.

On contact with Queenstown Tower, you'll probably be cleared to Queenstown remaining to the east of State Highway (SH) 6, or west of the lake shore. Both of these options will keep you clear of the **Jardines** parachute landing area (PLA) of the CTR.

The PLA is delineated by SH 6 and the lake shore, between the northern boundary of Lakeside Estate (a gated residential area nestled in the acute angle formed by SH 6 diverging from the lake shore), and a line due west from the Remarkables Mountain Lodge to the lake shore. You may be asked to make an intermediate report at **Wye Creek**, depending on traffic density. Be aware that there could be training aircraft operating south of **Deer Park** down to **Halfway Bay** and in the vicinity of Kingston.

Looking south from Deer Park to Kingston.



From the west and south-west

Monitor 119.2 MHz, and make frequent position reports on that frequency, when operating in the Fiordland CFZ.

Aircraft arriving from Te Anau or Milford will generally approach along the middle arm of Lake Wakatipu. Because of the large amount of traffic using this route to and from Milford Sound, the approach to Queenstown is along the right side of the lake (indicated by the “Main Traffic Flow” depiction on the VNC) with reporting points at **Mount Nic Station, Stream, Walter Peak, Gully, Hidden Island, and Shoreline**. It’s important to note the level crossing **Gully** 2700 feet or below. It’s imperative you follow this, to ensure separation from IFR traffic, unless a specific clearance to cancel that level is issued by ATC.

Also note that the circuit joining from **Tollgate** is between 2700 feet and 3500 feet. This is to protect potential go-arounds from runways beneath you, and you’ll again need a specific clearance from ATC before you descend. This is the Nic arrival as listed in the AIP arrival procedures – note the specific runway instructions after passing **Hidden Island**.

Contacting the tower at **Black Gorge** will help ATC to issue a Nic arrival clearance in good time.

In some cases, Queenstown Tower may issue a detailed plain language clearance instead of a Nic arrival clearance.

When in the **Rat Point – Mount Nic Station** area, keep your eyes peeled, also bearing in mind the T753 upper limit of 4000 feet. Outbound and inbound traffic may be on different frequencies as they make the change between 118.1 MHz and 119.2 MHz. If you have two radios, monitor both frequencies.

Also be aware that any inbound traffic from Te Anau will be coming out of **Afton Burn Saddle** and heading towards **Walter Peak**.

Watch out for aircraft entering and leaving the low flying zone (L769) in this area.

Looking towards Mount Nicholas, with Von River Valley on the right.



Afton Burn
Saddle

Mount Nic
Station

Stream

Rat Point

Black Gorge



Shotover River entering Kawarau River.

From the north-west and north

Expect entry through **Moonlight** via the Johnson arrivals (for helicopters), and via VRPs such as **Lake Hayes** or **Tucker Beach** for fixed-wing. Watch for large volumes of traffic vacating the CTR through **Skippers Saddle** if inbound to **Moonlight** from the north.

Moonlight is generally an inbound-only route. The main traffic flow of scenic aircraft to Milford Sound now departs via **Skippers Saddle**.

View from Glenorchy to Mount Nic Station.



Queenstown circuits

Circuit patterns at Queenstown are unique because of terrain constraints. This can be daunting for a pilot not used to seeing high terrain adjacent to an aerodrome.



Be forewarned of the lack of a clear horizon around the circuit pattern, particularly when making turns. Carefully monitor attitude and airspeed.

Controllers expect minor variations to the circuit pattern, but if you wish to make a major diversion, you must obtain a clearance. Remember, if you're uncomfortable with any circuit or runway instruction, say so.

After landing, stay on the tower frequency until clear of the manoeuvring area.

Runway 05/23

For VFR aircraft less than 5700kg, the circuit directions for the main runway are left for Runway 05 and right for Runway 23. The downwind leg is kept quite close-in because of terrain.

Be disciplined in maintaining correct circuit height on the downwind leg. Helicopter flight paths cross under and over the downwind leg and there may be simultaneous movements off Runway 14/32. If you allow your height to drift above circuit height (perhaps subconsciously trying to increase terrain clearance), this could result in a 'hot and high' approach. This is particularly evident on Runway 14/32.

Downdrafts are likely when crossing the Shotover River on approach to Runway 23.

Runway 14/32

Runway 14/32 has particular terrain considerations. Circuit directions are right for 32 and left for 14.

After take-off on Runway 32, you're heading for rising terrain, and will need to start veering right towards Shotover Bridge before reaching 1700 feet (500 feet AGL) as terrain dictates. The locals commence a gentle turn after crossing the main runway. Late downwind for Runway 32, you need to be close to the Remarkables. Even then, there'll be a short base leg confined by terrain.

There can be a tendency to turn on to final too soon, resulting in a 'hot and high' approach. Terrain clearance is reduced when late downwind. When turning through base onto final, the land falls away – and it's not until then that you realise you're too high. It's important to turn final about 1700 feet (about 500 feet AGL). Due to buildings in northeast winds, mechanical turbulence may be experienced on late final for Runway 32.

The left circuit on Runway 14 means a climbing left turn towards the Remarkables after initial climbout. Although there's plenty of room, the sheer magnitude of these mountains creates an illusion of being very close to the terrain.

Additionally, the lack of a defined horizon in the turn means that careful monitoring of attitude and airspeed is essential. Extending climbout further south will make the turn less intimidating.

If you don't want to turn towards the high terrain, tell the tower that you require an alternative clearance, such as an extended climb to the south.

On approach to Runway 14, because of terrain constraints, you need to establish approach configuration early (for example, when crossing the main Runway 23 threshold on the downwind leg).

Establish left base (remaining inside the hill) using Lake Johnson as a reference. It's important to be at 500 feet AGL (roughly 1700 feet AMSL) when turning final in order to land in the first half of the runway. Approach profiles will be close to the terrain. There are power lines (visually marked with silver discs) that cross under the final approach. Note them, but don't allow excessive clearance (maintain 1500 feet indicated until crossing the wires). You have the option to overshoot if you're not happy.

If you accept a crosswind landing on Runway 14 or 32, be aware there's likely to be a tailwind component on both approaches that won't be indicated on the windsock at ground level. This can happen because of wind funneling around the terrain.



Photo courtesy of Queenstown Airport.

Surface movement and parking

Study the aerodrome and ground movement charts in *AIP New Zealand, Vol 4*, so that you're familiar with the taxiways and general aerodrome layout before arrival - the best time to do this is during your preflight planning. If you have any queries on availability and location of parking areas, contact a local operator or the airport company via their website, queenstownairport.co.nz.

Take care when taxiing, as the aerodrome can be very busy with a mix of airline aircraft, and light aeroplanes, and helicopters. Particular care is required in the vicinity of the main apron, where jet blast could be encountered. Grass areas can be rough or undulating in places.

Aircraft below 5700kg are prohibited on the main terminal apron itself.

Queenstown is an international airport, and you'll need to carry your pilot licence or airport identity card.

Itinerant pedestrian pilots are to enter and exit, only via either the premises of the operator they have a fixed-based

agreement with, or the push button pedestrian gate by Glenorchy Air.

To return to airside through the push button pedestrian gate by Glenorchy Air, ring the number on the gate.

Pilots must wear high-visibility clothing when airside, and ensure all access gates are closed securely behind them.

For parking information, refer to the Local Traffic Regulations page in *AIPNZ, Vol 4*, NZQN AD 2 - 20.3.

Control locks should be installed at any time your aircraft is unattended, not only because of helicopter rotorwash, but also because the wind can change in your absence.

If parking overnight or longer, check the weather forecast before picketing your aircraft, ensuring that it's positioned appropriately if strong winds are anticipated. You'll need to have your own pickets and tiedowns, as any already in the area will belong to local operators. For further information on picketing generally, see the GAP booklet *Secure your aircraft*.

Queenstown traffic

Queenstown traffic comprises a mix of international and domestic flights (B737, ATR, and A320), scenic flights (both multi and single-engine), helicopters, private aircraft, and a wide variety of visiting aircraft. There can be morning balloon flights over the Wakatipu Basin.

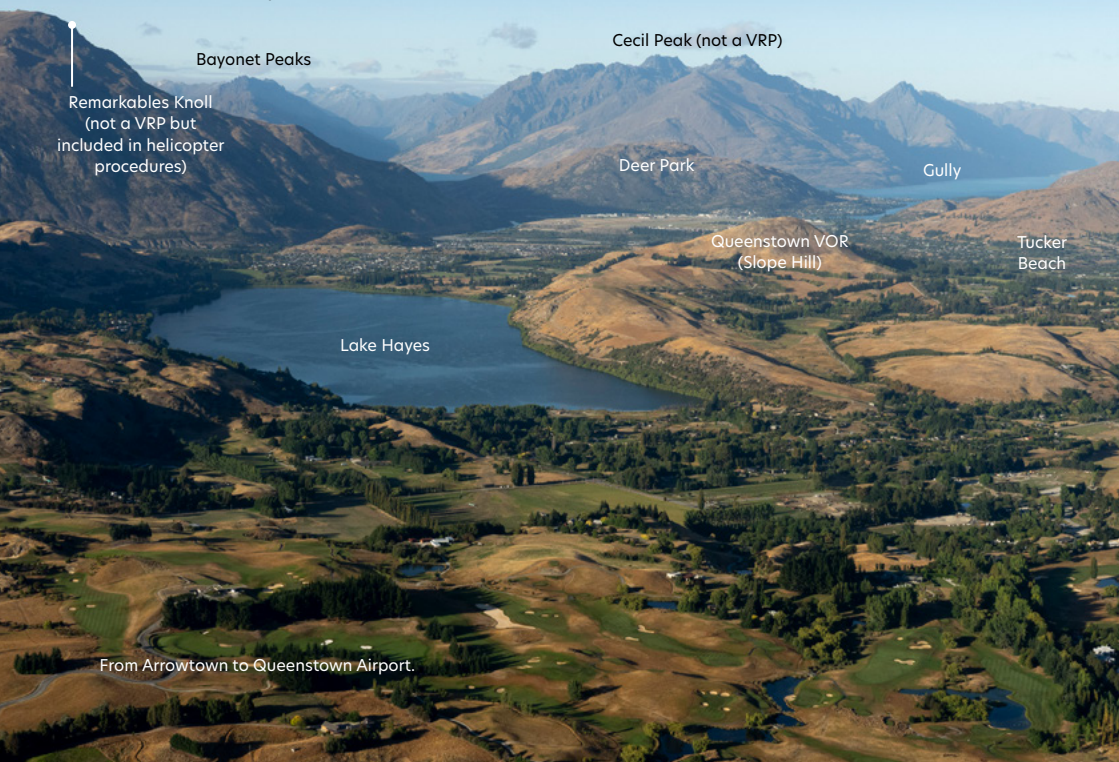
There are also special RNAV/RNP instrument approach and departure procedures for jet aircraft that may position them where you're not normally expecting them.

Peak periods

Peak times for Milford traffic departures are around 08:00 to 10:00, 12:00 to 12:30 and 14:00 to 15:30, with arrivals peaking about 11:30, 13:30 and 16:00. The traffic mix comprises 5 to 15 aeroplanes and 15 or more helicopters each time.

IFR aircraft movements peak between 09:30 and 10:30, with a steady flow throughout the afternoon. In winter, there are over 50 IFR movements between 10:00 and 16:00.

Try to avoid the peak periods for a less stressful arrival, but don't be intimidated by the traffic. The tower is very good at accommodating the traffic mix, provided pilots have done the appropriate planning and preparation.



From Arrowtown to Queenstown Airport.

Departure procedures

VFR flights departing Queenstown should first listen to the ATIS on 126.4 MHz and then contact Queenstown Delivery on 121.9 MHz before entering the manoeuvring area.

State your call sign and destination, and request the preferred departure (listed in *AIP New Zealand, Vol 4*). For helicopters, include your current location on the aerodrome. If the requested departure procedure is not available, an alternative will be issued, probably as plain language instructions.

The published procedures are to facilitate traffic management. They don't prevent pilots from requesting alternatives, which will be possible when meteorological and traffic conditions permit. For example, if you're departing to the Te Anau area, a clearance direct to **Afton Burn Saddle** (which crosses the traffic flow) may be available instead of the **Rat Point** departure. This may be preferable for a smoother ride during north-westerly conditions.

Queenstown Delivery will issue clearance for the departure procedure. This eases the workload on the tower controller and reduces communications on the tower frequency. Delivery does not issue taxi instructions. When ready to taxi, call Queenstown Tower on 118.1 MHz for taxi clearance. Engine run-up and so on, must be completed before requesting a taxi clearance.

After take-off, follow the assigned departure procedure and report when clear of the control zone. Queenstown Information is available on 128.9 MHz within the Queenstown flight information sector. Monitor and make frequent position reports on 119.2 MHz when operating in the Fiordland CFZ (refer to the VNCs).



If departing off Runway 23 and vacating via the normal circuit, ATC will advise that a drift left is allowed before making the right turn into downwind. This is to allow more room for the right turn from the high terrain of **Queenstown Hill**. This does not imply that you can turn left around **Deer Park**. Throughout this manoeuvre, you must remain in the Frankton Arm and vacate via the normal Runway 23 circuit.

If you require a clearance into the Queenstown CTA, contact Queenstown Approach on 125.75 MHz.



To the north-east and east

The **Soho River** departure is to track via Arrowtown and **Soho River** VRP at or below 6500 feet. Departing via **Soho River** and Cardrona Saddle (4955 feet) requires a disciplined climbout in order to arrive at Cardrona at a safe height. If an orbit is necessary to gain the required altitude, you must request clearance from the tower if still in the CTR, as this will be a deviation from your original clearance. Once north of **Soho River** VRP, report clearing the CTR.

If you have two radios, listen ahead on 120.1 MHz for traffic coming from Wānaka. After the saddle, make a call on 120.1 MHz (addressing "Wānaka Traffic"), with your position, altitude, and intentions.

To the east, the **Victoria** departure is via **Bungy Bridge** VRP then direct to **Victoria** at or below 4500 feet.

To the south

The **Devils Staircase** departure involves tracking east of Highway 6 direct to **Devils Staircase** at or below 4500 feet, because it keeps you clear of skydivers at Jardines parachute drop sector.

As good operating practice, all departures off Runway 23 that track via downwind initially, are approved to drift left of the centreline before making a right turn. This is approved without a clearance due to terrain.

If taking off on Runway 23, don't try to turn left inside the **Deer Park** knoll. Instead, make a right turn via the standard circuit, and leave to the south from the mid downwind position. A departure via the Frankton Arm or with a left turn (non-standard circuit direction) requires a specific ATC clearance.

Alternatively, departure will be by the normal circuit, departing overhead. Proceed down Frankton Arm and then turn left at a safe height. Taking off on Runway 05 would be a normal circuit and departure overhead.

Remember to watch out for parachuting operations at **Jardines**.

To the west

The **Rat Point** and **Moke Lake** departures involve tracking via **Sunshine Bay** to **Rat Point** or **Moke Lake** as applicable. There are altitude limitations on each departure to keep outbound traffic clear of inbound traffic, with both keeping close to their right-hand lake shore. If your destination is Te Anau/Manapouri, you'll need to cross the main inbound Milford traffic flow at some stage. Depending on traffic, ATC may offer a more direct route.

Local Te Anau-bound aircraft, if cleared direct to **Walter Peak**, will normally follow the southern lakeshore to be inside any inbound traffic tracking offshore.

Keep your eyes peeled in the **Rat Point - Mount Nic Station - Afton Burn Saddle** area, as inbound and outbound traffic can be on different frequencies for a short time as they change between 118.1 MHz and 119.2 MHz. If you have two radios, monitor both frequencies.

To the north-west

This is a busy area, because the main traffic flow to Milford Sound departs via **Skippers Saddle** to Monument Saddle or **Lake Luna - Mount Larkins**, as depicted by the arrows on the VNC.

The **Skippers Saddle** departure involves tracking via **Tucker Beach** to **Skippers Saddle**, at or below 5000 feet. **Skippers Saddle** is the main departure from Queenstown to the west.

Lake Luna, looking south towards
Mount Nicholas and the Von River Valley.



Helicopter arrival and departure procedures

Exercise caution when operating in strong wind conditions (especially in light, two-bladed helicopters such as the R22 and R44), in particular around the Kawarau Gorge, **Roaring Meg**, **Crown Saddle**, and Cardrona Saddle in strong westerly conditions.

Remarkables arrival

This arrival is for local commercial operators returning from a landing on the Remarkables.

Johnson arrival

This is a commonly used arrival procedure for helicopters joining from the west and north.

Enter the QN CTR at **Moonlight**, and track via Arthur's Point to the northern end of Lake Johnson 5000 feet or below. Cross Arthur's Point 3500 feet or below. Report approaching Lake Johnson. The Johnson arrival clears you only to the north end of Lake Johnson.

Remarkables departure

This departure is for local commercial operators departing Queenstown Airport and landing on the Remarkables.



Aircraft performance

Aircraft performance is always a consideration in mountainous terrain.

The elevation of Queenstown aerodrome is 1171 feet. Be aware of the effects of density altitude - on a warm sunny day in low-pressure conditions, the density altitude may be as high as 3500 feet. Besides affecting take-off performance, such conditions will adversely affect climb performance.

If you're contemplating an IFR flight, be aware that the IFR procedures at Queenstown are suitable only for aircraft with appropriate performance. They were largely set up for airline traffic, and may not be suitable for lesser-performing IFR-equipped aircraft.

For further information see the *Take-off and landing performance* and *Mountain flying GAP* booklets.

Noise abatement

Be a good neighbour and apply noise abatement procedures.

Appreciate that noise can be accentuated in an area of mountains and valleys. Consideration when flying over, or near, residential areas will be appreciated by residents and by local operators who have specific noise abatement procedures in place.

Also study "Noise Abatement Procedures" in AIPNZ, Vol 1, NZQN AD 2.21 - these are particularly important for helicopter operations.

Avoid directly overflying residential areas where possible. If it's necessary to do so, maintain as much altitude as you can, and reduce your power setting if practicable, in particular over Frankton Arm and the town. If you're joining from the west downwind for Runway 23, maintain 3000 feet until in Frankton Arm, and then descend to circuit height.



Photo courtesy of Queenstown Airport.

Adjacent areas

There is considerable aviation activity in the adjacent areas outside Queenstown controlled airspace.

Wānaka

The En-route (ENR) section of *AIP New Zealand, Vol 4*, under “VFR Operations - General” warns about intense paragliding activity in the Wānaka area up to an altitude of 9500 feet. Intensive tow-launched parasailing takes place behind boats on the southern end of Lake Wānaka, and foot-launched hang gliding occurs in the ranges to the west of Glendhu Bay. There is also paragliding from Mount Iron just east of Wānaka township.

The unattended aerodrome frequency for Wānaka is the CFZ frequency, 120.1 MHz.

Parachuting operations take place from Wānaka throughout the year, with up to four flights an hour in busy periods. These flights may climb as high as 16,000 feet. Although the drop altitude will normally be in the CTA, the jump aircraft also operate on 120.1 MHz, so listen out and watch for parachute activity.

P912 is just west of the Eastern Ridge so avoid inadvertent entry to this area during parachute operations.

Be on the lookout for airline traffic flying into Wānaka.

These aircraft are equipped with airborne collision avoidance systems. Keep ALT selected on your transponder at all times

when airborne. The GNSS-based instrument approaches to Wānaka start in the **Tarras** area at 6700 feet, and are aligned with Runway 29.

Wānaka has one of the busiest helicopter training schools in the South Island, and there is also microlight training available on the field.

All this, combined with the local scenic flight and airline operations, and the occasional high-performance warbird, make for a very diverse mix of aviation. Be extremely vigilant when transiting the area.



Entrance to Frankton Arm with Queenstown behind. Kelvin Heights (residential area) lies along the southern shore of Frankton Arm.

Te Anau/Manapouri

If routing to Te Anau/Manapouri via the Von Valley, you'll be in the Fiordland CFZ (119.2 MHz) until you reach **South Mavora Lake**.


The unattended aerodrome frequency for Te Anau/Manapouri is 119.1 MHz. There are a number of helicopters based in the Te Anau area, and a floatplane operates from Te Anau lakefront.

... and beyond

It's likely that you'll fly through the centre of the South Island on your way to Queenstown.

The Southern Alps MBZ has intensive tourist aircraft activity, both fixed-wing and helicopter. Peak period is between October and April. If you intend to enter the area, make sure you've studied the procedures and the appropriate VNCs.

Expect parachute operations at Pukaki aerodrome, at any time of year. Omarama is the base for intensive gliding activity. This can be seven days a week, mostly between October and April, with more intense activity in holiday periods and during competitions, usually held in mid-November and January. Expect gliders around Mount Benmore, Mount St Cuthbert, Omarama Saddle, and Lindis Pass. They can also be between Lake Tekapo and the Ben Ohau Range, and around Wānaka and Cromwell. The glider chat frequency is 133.55 MHz. You can call to check whether there are any gliders in your vicinity, although some may be NORDDO.



Runway 29
threshold
at Wānaka
aerodrome





Good Aviation Practice



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Email: info@caa.govt.nz

See the CAA website for civil aviation rules, advisory circulars, airworthiness directives, forms, and more safety publications.

To order publications such as GAPs and posters, go to aviation.govt.nz/education.

aviation.govt.nz

*In, out, and around Queenstown
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**Te Kāwanatanga
o Aotearoa**
New Zealand Government