Queenstown – Milford

Resident Aircraft

User Group

-QMUG-

Operations Hand Book

REVISION STATUS

- Revision 0 Effective 1st July 2012
- Revision 1 Effective 1st Jan 2014
- Revision 2 Effective 1st Apr 2016
- Revision 3 Effective 12 December 2022

Revision 3 Changes

- Removed references to the Queenstown FIR. It does not exist. Replaced with Queenstown/Fiordland area.
- Simplified Missions Statement.
- Updated list of user group members.
- Aerodromes Section general update and in addition;
    - Better definition of sections, added Queenstown Aerodrome
    - NEW SECTION, General Ops – MF AFIS. With the deletion of the Fixed Wing Commercial Operators (FWCO) and Commercial Helicopter Operators (CHO) MOUs added new requirements.
    - Helis parking on the taxiway confirmation and pilots responsible for safe passage of passengers to/from aircraft.
    - Updated apron parking procedure.
    - MoT links update
    - NEW SECTION, Queenstown Aerodrome.
    - General Ops – QN Tower NEW. With FWCO and CHO MOUs withdrawn detailing spacing requirements in trail when re-joining from Milford. Tracking south of Jardines and crossing the ZQN aerodrome between A5 and A6 when joining downwind for RWY 14 or on the NIC Arrival RWY 23. Consistent and predictable ops including speeds. Holding procedure if required to remain clear of the QN CTR/C. “Short 14”.
- Sections 8 & 9 review. Removal of duplicate information and general layout tidy up. No fundamental change.
- Section 12. Reference to MOUs with Airways withdrawn as the FWCO and CHO MOUs deleted. As far as practicable all operations within controlled airspace should align with CAA/MATS/NZAIP rule requirements and procedures therefore MOUs should not be necessary.

INTRODUCTION

This Operations hand book has been compiled by the Queenstown Milford User Group as supplementary information for;

- Operators,
- Pilots,
- And other interested parties

For the conduct of flight operations in the Queenstown/Fiordland Area and Predominantly within the;

- Queenstown Control Zone (QN CTR/C),
- Fiordland Common Frequency Zone (CFZ)
- And Milford Sound Common Frequency Zone (CFZ)

It is not a substitute or replacement for;

- The CAA Rules
- Individual company Operations Manuals
- Current maps and charts.

It is a hand book to assist with the promotion of aviation safety within the Queenstown/Fiordland area and foster good airmanship.

This Manual is not to be copied by any third party without the approval of the Queenstown Milford User Group, however it is available for use and distribution to any operator intending to fly within the Queenstown/Fiordland area.

Distribution may be electronic or by hardcopy. It is the responsibility of the end user to ascertain the currency of the information contained within this publication. Confirmation of the current revision of this hand book can be found at www.qmug.co.nz

Each holder of a copy of this publication should inform the Group Chairperson of their contact details so they can be notified of amendments.

Definitions

Aircraft
When the word aircraft is used throughout this handbook it can be read as pertaining to both Helicopter and Aeroplane/fixed wing, otherwise the word Helicopter or Aeroplane will be used when the information or procedure is type specific.

Privacy

Any company or personal contact details provided in this publication are to be used for User Group business only

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12. Appendices

A) Constitution

B) Procedures Report Form

C) User Group Memorandum of Understanding

D) Employees Signature Sheet

1. REFERENCES

In addition to the CAA rules, the following references have been used to compile this manual;

- AIP Volume 1 & 4
- Maps and Charts
- Minutes from past meetings of the Queenstown Milford User Group
- Department of Conservation Publications
- The Fly Neighbourly Guide (Helicopter Association International)
- Individual Operator SOP's
- Ministry of Transport as Milford Aerodrome Operator
- Queenstown Airport Corporation NZAIP NZQN pages
- CAA GAP Booklet: ***In, Out and around Milford Sound***
- CAA GAP Booklet: ***In, Out and around Queenstown***

2. AMENDMENTS

2.1 This handbook contains only information of an advisory nature.

2.2 The currency of each page appears in the lower right-hand corner.

2.3 Each holder of a copy of this publication should inform the user group chairperson of their contact details, preferably email, so they can be notified of amendments.

2.4 Requests for changes of information or corrections to this book are to be made to the current QMUG Secretary qmugsec@orcon.net.nz .

2.5 Amendments will be posted or emailed to each operator following a change in an operating procedure within the Queenstown/Fiordland areas.

2.6 Holders of copies of this handbook need to check the currency of any information contained within before use. Confirmation of the current revision of this handbook can be found by contacting the Chair of the Queenstown Milford User Group.

3. THE QUEENSTOWN MILFORD USERS GROUP [QMUG]

3.1 The Queenstown Milford Users Group was formed in 1990 to promote safety for those aircraft operators operating within the Queenstown/Fiordland area.

It primarily consists of:

- Local Aircraft Operators
- Local Sport Aviation Operators
- Civil Aviation Authority of New Zealand
- Airways Corporation of NZ (Queenstown Tower & Milford AFIS)
- Queenstown Airport Corporation
- Ministry of Transport
- The Department of Conservation

3.2 It is of a non-regulatory nature providing a safety culture for the operators within the Queenstown/Fiordland area.

3.3 It also provides a relationship between the Department of Conservation and the operators to ensure that minimal impact is maintained within National Parks and with other operators and users of the Parks by preserving amenity values.

3.4 Meetings will take place approximately every six months, generally before and after the summer season. Additional meetings will be held as required to deal with specific issues.

3.5 The Secretary shall send out a notice of the meeting prior to the date and call for agenda items.

3.6 The Secretary shall maintain an accurate copy of all meeting minutes and email a copy of the minutes to all the members of the User Group.

3.7 A copy of the Groups constitution is appended to this document **Section 15A**

4a. MISSION STATEMENT

Aviation allows people of all ages and ability to visit Fiordland and Milford Sound, who in many cases would not otherwise have the opportunity to experience our remote alpine regions.

The Group's policy is to actively foster aviation in a safe and sustainable way, with particular awareness and consideration of potential disturbance to visitors and wildlife within the National Park.

4b. CODE OF PRACTICE

1. ***To develop and maintain an environmentally aware culture, in particular an awareness and consideration at all times of potential disturbance to other National Park visitors.***

2. ***To consider environmental effects when selecting aircraft types, in particular noise emission and aircraft capacity.***

3. ***To develop and regularly review aircraft operating procedures that minimise noise emission, particularly in sensitive localities.***

4. ***When safe and practicable, to follow flight paths that minimise impact on the environment.***

5. ***Pursue a policy of using flight paths clear of sensitive areas and in particular strict observance of minimum vertical and horizontal clearances in the vicinity of identified ground user sensitive areas (walking tracks, huts etc)***

6. ***Each resident operator is to elaborate in their exposition how they specifically embody this code of practice in their operation***

5. LIST OF USER GROUP MEMBERS

Company	Contact	email	Phone	Postal address
Air Milford	Antony Sproull	antony@airmilford.co.nz	**P 03 442 2351**	1 Tex Smith Lane Queenstown 9300
Air Safaris	Tim Rayward	tim@airsafaris.co.nz	**P 03 680 6880**	PO Box 71 Tekapo
Airways NZ, Queenstown	Jon Brooks	Jon.brooks@airways.co.nz	**P 0275316151**	Private Bag 50075 Queenstown 9348
Aspiring Helicopters	James Ford	james@aspiringhelicopters.co.nz	**P 034437152**	PO Box 168 Wanaka 9348
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CAA	Librarian		**P 04 560 9400**	PO Box 3555 Wellington 6140
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Department of Conservation	John Lucas	jlucas@doc.govt.nz		
Fly Fiordland	Shaun Ferris	shaun@flyfiordland.com	**P 0800 359 346**	Level 1 / 24 Town Centre TeAnau 9600
Fiordland Helicopters	Kim Hollows	info@fiordlandhelicopters.co.nz	**P 032497575**	PO Box 180, Te Anau 9640
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Glacier Southern Lakes Helicopters	Luke McKewan	Luke.mcewan@gslh.co.nz	**P 03 442 3016**	PO Box 2152 Queenstown 9346
Glenorchy Air	James Stokes	james@glenorchyair.co.nz		PO box 2372 Wakatipu 9349
Heli Glenorchy	Nic Nicholson	info@heliglenorchy.co.nz	**P03 442 9971**	PO Box 2796 Wakatipu
Heliview Flights	Richard Foale	info@heliview.co.nz	**P 034450444 M 021452942**	PO box 450 Cromwell 9384
Heliworks	Scott Theyers	cpilot@heliworks.co.nz	**P 03 441 4011**	PO Box 2211 Queenstown 9348
Milford Helicopters	Gavin Burgess	milford.helicopters@xtra.co.nz	**P 03 249 8384**	Milford Helicopters Te Anau 9600
Milford Sound Flights	Mark Quickfall Leon Hunter	Mark.quickfall@totallytourism.co.nz	**P 03 442 2687**	PO Box 920 Queenstown 9348
Ministry of Transport	Chris Read	Chris.read@amcl.co.nz	**P 0274335695**	
QAOSH	Evan Pearce	qaoshservicesltd@gmail.com	**M 0272202160**	

Company	Contact	email	Phone/ *Fax*	Postal address
Southern Regional Gliding Operations Officer		grahamerikson@xtra.co.nz	**P 03 332 7215** **M 021 374 583**	
NZONE	Hamish brown	hbrown@experienceco.co.nz	**M 0275689057**	PO Box 544 Queenstown 9348
Over The Top Helicopters	Louisa Patterson	louisa@flynz.co.nz	**P 03 442 2233**	PO Box 2094 Queenstown 9348
Queenstown Airport Corp.	Todd Grace	Todd.grace@queenstownairport.co.nz	**P 03 450 9031**	PO Box 2641 Queenstown 9349
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Te Anau Helicopter Services	Jennie Burgess	jennie@teanauhelicopters.co.nz	**P 0800 234 890** M 027 4749204	
The Helicopter Line	Mark Quickfall Danny Glover	Danny.glover@helicopter.co.nz		PO Box 1530 Queenstown 9348
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True South Flights	Peter Daniell	peter@truesouthflights.co.nz	**P 0800777922**	
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6. AERODROMES

6.1 Milford Sound NZMF(under certification review) – General Ops

Operating Procedures as published in the NZAIP and as below
Operated by Ministry of Transport. Aerodrome Manager Chris Read M 0274335695

Comms: Milford Flight Service **118.2 MHz** - "Milford Flight Service"
Milford Flight Service Ph. 03 249 8092
Unattended **118.2 MHz** – "Milford Traffic"

Milford Aerodrome Flight Service (MF AFIS) Hours of Service
0800-1600(NZST) 0800 – 1630(NZDT).
Outside MF AFIS hours of service, unattended procedures apply.

General Ops – Aircraft Arrivals

- Arrivals from the East are to use the Upper Donne or Darren Pass (when possible) to call 118.2 MHz at Gulliver. *R/T up the Donne normally results in broken transmissions.*
- Establish contact with Milford Flight Service before saying position/intentions.
- A straight in approach from the eastern passes is acceptable when Flight Service is on watch provided there is no disruption to other circuit traffic. Straight in approaches from the east are not to be used outside Flight Service hours of watch
- When entering Milford from the South West, you are to be 1500ft or below by ADA. If joining, a left base 29 or right base 11 is acceptable when Flight Service is on watch and if there is no disruption to the circuit traffic.
- An overhead join **must** be used when Flight Service is off watch.

General Ops – Milford Overflights

- Maintain 5000ft or above the circuit area to avoid confliction with aircraft joining to land at Milford Sound.
- If operating 1500ft or below and need to overfly the circuit area, follow circuit patterns.
- If MF AFIS advises no traffic, the two restrictions above do not apply.

General Ops – MF AFIS

- Avoid phoning Milford Tower during the operational day to limit distraction.
- Visiting Milford Tower should be kept to a minimum and only on days/at times when traffic levels are low.
- ALL AIRCRAFT departing Milford Sound for Queenstown are to advise Milford Flight Service. *This enables essential arrival information to be sent to Queenstown Control Tower for air traffic management.*
- Contact Milford Flight Service with departure details **prior** to entering the taxiway.
- For flights operating on departure **other** than the **Arthur Valley**, notify Milford Flight Service of the intended departure route and advise other traffic on the 'rolling' call to reinforce the information to following traffic.
- No ATS flight following service is provided unless a flight plan or SARPLAN is lodged with the Airways' NBO.

Milford Sound Helicopter Specific ops

Helicopter 29 Departure

Either;

Climb straight ahead to 500ft then turn left to follow the circuit pattern, vacating East. If traffic flow inbound to the circuit is heavy, a right turn is preferred to avoid climbing into the downwind traffic. (Milford Flight Service must be on watch and advised to do this)
Departures to the East to vacate via Homer Saddle or Adelaide Saddle (when possible)

Or;

Climb off RWY 29 to 500ft, drifting right on track to Harrisons Cove or to the Mouth of the Sound

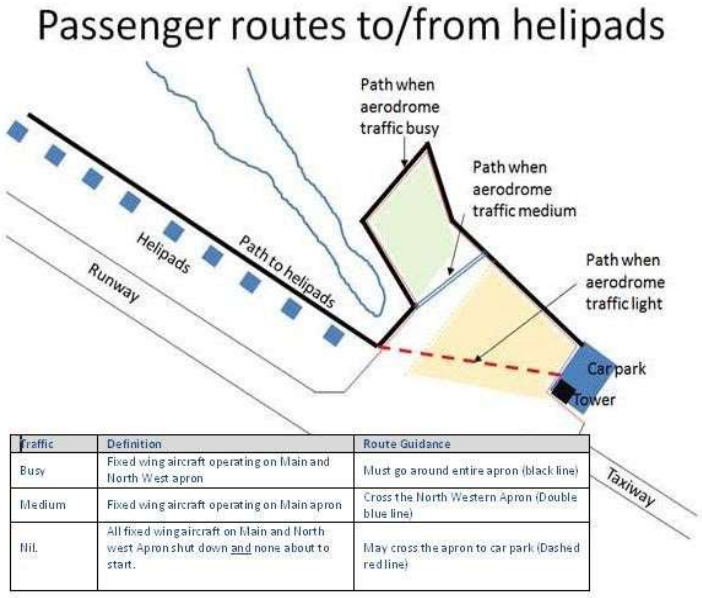
Avoid vacating right off RWY 29 to the Bowen Falls and then East, unless necessary for photography, filming etc. If doing this, advise Milford Tower of these intentions.

Helicopter 11 Departure

Climb East, remaining on the Southern side of the Cleddau Valley – vacate via Homer Saddle or Adelaide Saddle (when possible), or

Make a non-standard right turn (advising the Tower beforehand) and vacate via the Arthur Valley or make a left turn off 11 to vacate via the circuit pattern to Harrisons Cove or the Mouth.

Helicopter Passenger Routes



Traffic	Definition	Route Guidance
Busy	Fixed wing aircraft operating on Main and North West apron	Must go around entire apron (black line)
Medium	Fixed wing aircraft operating on Main apron	Cross the North Western Apron (Double blue line)
Nil	All fixed wing aircraft on Main and North west Apron shut down and none about to start.	May cross the apron to car park (Dashed red line)

Additional heli parking during peak season may be available on the taxiway subject to MoT approval and Airways Milford Flight Service being on watch. Pilots are responsible for the safe passage of their passengers to/from their aircraft. From the helipads indicated above, remain on the pathways provided.

Milford Sound – Fixed Wing Specific ops

South Easterly operations Aeroplanes

Chief Pilots have agreed to operate with a guideline of a steady 10 knots of SE wind at Milford Sound aerodrome with a maximum gust factor no greater than 15 knots. Outside these parameters the operators should consult.

Arrivals

- Passenger loaded aircraft to descend via the Mouth of the Sound and remain in the flow
- Ferry flights may follow the straight in approach procedure on page 12 General Ops

Departures

- Enter the Arthur Valley if possible at 3000ft but not above due inbound traffic from the east. If unable to reach 3000ft, maximize height tracking as far as the Williamsons/Pater point line. Aim to be at Ada not above 5000ft when Mouth South Departures in place.
- Use Green Valley to obtain altitude to cross Balloon Pass 5000ft or above
- Use West Branch Clinton Valley via McKinnon Pass only if weather or operational need require
- Departures to the East to vacate via Homer Saddle or Adelaide Saddle (when possible)
- Mouth South, when weather allows climb to Mouth of Sound to be at or above 3000ft by St Anne Point, then track south via Transit valley until sufficient height is gained to track east and cross overhead Ada or south of at 5500ft or above.
- Mouth North, advise if intending to climb above 1500ft by Stirling Falls.

Noise Abatement

- Be considerate with flight paths, engine power settings and height
- Avoid popular walking tracks / passes / climbing areas where possible or maximize height

Milford Sound – Apron Procedures

- No aircraft to park in front of Tower
- Aeroplane parking pattern as shown below

Short term parking (ferrying aircraft) start parking from the left hand end of the yellow line to allow easy access to/from the runway. Long term parking (aircraft waiting for passengers off a cruise) park from the right hand end. Move your aircraft forward as space becomes available to allow more aircraft to park behind. When the row is full, continue with the same principle on the next row dovetailing aircraft until rows are full.

- Pilots who are not busy may assist in moving aircraft if another is boxed in
- No nose to tail parking
- No angle parking except in north-western apron
- Use close spacing
- Pilots are responsible for directing passengers to their aeroplane and for their safe passage.
- Photography on apron areas to be discouraged
- When loading aeroplane use walkway as appropriate
- All pilots may assist with passenger/marshalling including inter-operator. This is a collective responsibility.
- Pilot briefing must insist on disembarking procedure and escort responsibilities be adhered to
- Do not start aeroplane until aeroplane in front has started. This must be applied with common sense as some variations exist
- If necessary, hot loading of aircraft to be done on the north-western apron only.

Ministry of Transport Health & Safety Policy Manuals for NZMF

The Policy sets out the aerodrome relationships and responsibilities of each employer. The manual establishes an aerodrome Health and Safety Committee and provides that any non-operational incidents/accidents that occur to your employees or

passengers/visitors are notified to the Ministry as well as through your own procedures, so the Ministry has an overall picture.

The Policy and Manual are available from the Ministry's website;

https://www.transport.govt.nz//assets/Uploads/Policy/Milford-Sound-Aerodrome-Health-and-Safety-Policy.pdf

https://www.transport.govt.nz//assets/Uploads/Report/Milford-Sound-Aerodrome-Health-and-Safety-Manual.pdf

https://www.transport.govt.nz//assets/Uploads/Report/Milford-Sound-Aerodrome-Hazard-Risk-Register.pdf

Ensure all employees with duties at the aerodrome are made aware of the Policy and Manual

6.2 Glenorchy Aerodrome NZGY

Operating Procedures as published in the NZAIP
Operated by Queenstown Airport Corporation
Aerodrome is situated 2 km South of the Glenorchy Township.

Comms; Unattended / Fiordland CFZ **119.2 MHz**

Glenorchy Parachute Dop Zone (PDZ)

This PDZ is operated by NZONE and is located on the Glenorchy Airstrip NZGY. Extensive parachute operations may take place at this PDZ during summer months. Care should be taken transiting the Glenorchy area as the PDZ is on the Queenstown – Milford Departure route and the parachute drop plane may be climbing or descending through this traffic route.

Noise Consideration

As much as possible avoid overflying the township, Wyuna and Lodges close to the strip.

Refer to NZGY Noise Management Plan, latest revision.

6.3 Queenstown Aerodrome NZQN

Operating Procedures as published in the NZAIP
Operated by Queenstown Airport Corporation

Comms: Queenstown Tower **118.1 MHz**
Queenstown ATIS **126.4 MHz**
Queenstown Delivery/Flight Service **128.9 MHz**
Queenstown Control Tower Ph. 03 450 9182

General

The airport is home to a significant number of commercial GA (fixed wing & heli) operators. All fixed wing operations are located at the Southern Apron while heli operations are divided across the Northern & Southern Aprons.

The airport is served by an ever-increasing number of regular passenger transport (RPT) operations.

Queenstown Aerodrome sits within the QN CTR/C and in addition to an aerodrome control service, an approach surveillance service is provided within the QN CTA/C.

Air traffic services at the aerodrome are overseen by the Airways' Regional Ops Manager – Southern Towers, who is also responsible for Milford air traffic services.

In addition to general QMUG meetings, ATS briefings for pilots may be held at any time to assist with the safe operation of air traffic in the Queenstown/Fiordland area.

General Ops – QN Tower

- Avoid phoning Queenstown Tower during the operational day to limit distraction.
- Visiting Queenstown Tower should be kept to a minimum and only on days/at times when traffic levels are low and subject to prior ATC approval.
- ALL AIRCRAFT departing Queenstown with destination or overheading Milford Sound are to advise Queenstown Delivery/Information on first contact. *This enables essential arrival information to be sent to Milford Tower for air traffic management.*

- No ATS flight following service is provided unless a flight plan or SARPLAN is lodged with the Airways' NBO.
- Queenstown Information **128.9 MHz** should be used for advice of operation and flight information between Queenstown and Milford. Note: 128.9 Mhz coverage is reduced below 6000ft west of Lake Wakatipu.
- To assist with the flow of inbound traffic to the aerodrome all heli flights are requested to establish contact with QN Information to advise intentions prior to the QN CTR/C boundary, or prior to lifting off from within the QN CTR/C. Any aircraft operation not joining via standard entry points should contact QN Information to request entry information.

Parachute Operations at Jardines (NZONE)

The PDZ at Jardines is defined as;

All that airspace in the CTR/C within the area clockwise from abeam Remarkables Lodge, via Highway to abeam the northern boundary of Lakeside Estates, then west via the northern boundary of Lakeside Estates to the coastline, then via the coastline to a point 0.75 NM north of Jacks Point, then east to Remarkables Lodge. [ref NZAIP NZQN AD 2 – 35.3]

For air traffic management purposes Queenstown Tower may instruct aircraft returning from Milford on the NIC Arrival to track south and clear of the Jardines PDZ; that is south of Lakeside Estates – east of the Main Road SH6.

Short 14

Queenstown Tower will not nominate or offer a reduced length on RWY 14. However at pilot request only, a departure off RWY 14 from south of the RWY 23/05 intersection may be approved. A request can be made to Queenstown Delivery **121.9 MHz** for this using the term "Short 14".

Arrival Procedures from Black Gorge

Fixed wing traffic returning from Milford to Queenstown via Black Gorge shall contact QN Tower **118.1 MHz** abeam Black Gorge advising;

- Callsign,
- Position,
- Traffic they are following, and
- QN ATIS designator and QNH

"Following" is defined as the pilot has and expects to maintain visual contact of the specific aircraft ahead. Aircraft shall ensure that they are in an orderly sequence and are **operating at least 3NMs in trail.** The 3NM in trail sequence shall be maintained until the aircraft ahead enters the circuit, unless ATC approve otherwise. *This greatly assists with traffic integration within the immediate vicinity of Queenstown aerodrome.*

NIC Arrival

Due to Class C airspace separation requirements, the VFR NIC Arrival procedure is very detailed and contains numerous requirements.
Altitude/tracking restrictions can only be removed or amended, subject to ATC approval, when separation with IFR aircraft is not required.

To assist with segregation of flights within the immediate vicinity of Queenstown, when joining downwind for RWY 14 or crossing over the aerodrome to join downwind for RWY 23, track over or slightly east of the runway 23 threshold.

After landing, vacate the runway as soon as speed allows via the next available taxiway. Taxi instructions will be issued by Queenstown Tower.

Consistent and Predictable Operations

As of 12 December 2022, the two helicopter procedures Standard West and Bravo are removed from use. As such, all GA aircraft arriving/departing Queenstown may need to be established in the same sequence. Similar aircraft speeds/flight characteristics is therefore paramount to ensure a safe and expeditious operation.

On departure and arrival, all aircraft are requested to operate within the speed range of 80 to 110kts. Crossing the aerodrome boundary on arrival the speed range is 60 to 90kts. The area that these speeds apply is the circuit vicinity and this Tollgate – Shotover River – Slope Hill – Quail Rise/Lake Johnson – Frankton Arm.
If requested to follow, helicopters should not operate immediately close behind fixed wing aircraft. Heli pilots should follow at a safe distance in case the leading aircraft commences a go-around.

Holding Clear of Controlled Airspace

During peak times, aircraft (heli and fixed wing) may be instructed to remain clear of controlled airspace. As such, there could be multiple aircraft holding clear of the QN CTR/C in the vicinity of Black Gorge (fixed wing) and Moonlight (heli).

QMUG defined best practice for establishing and maintaining a hold at these locations is;

Black Gorge

- Fly a circuit pattern from Black Gorge to Rat Point, then
- Creighton Station, to
- Pidgeon Island, to
- Greenstone Station homestead, to
- Elfin Bay, to
- Black Gorge.

This pattern enables two, possibly three aircraft to orbit at the same level. Communicate on 119.2 Mhz

Moonlight

No holding location/pattern as yet defined. Helicopter traffic might land outside controlled airspace rather than orbit clear. Communicate on 119.2 Mhz

7. COMMON HELICOPTER LANDING SITES IN FIORDLAND

Tutoko

- Elevation: 6,500ft
- Freq: 119.20
- Details: Two landing sites, an upper and lower site on the Tutoko Plateau, head of the Tutoko Valley. Approaches are made from the Northern Side of Tutoko, from the Tutoko Valley and from the Harrisons Valley.

Madagascar Beach

- Elevation: Sea Level
- Freq: 119.20
- Details: If flying low along the coast between Milford and Martins Bay, be aware of helicopters taking off and landing from Madagascar Beach.

Lake Erskine

- Elevation: 4,500ft
- Freq: 119.20
- Details: Mid Neale Burn Valley, Eastern Side. Helicopters land at the SouthWestern end of the lake.

Southern/Lower Humboldts

- Elevation: 3,900ft
- Freq: 119.20
- Details: Commonly used landing site, approaches are made either from the West (Caples Valley) or from the East.

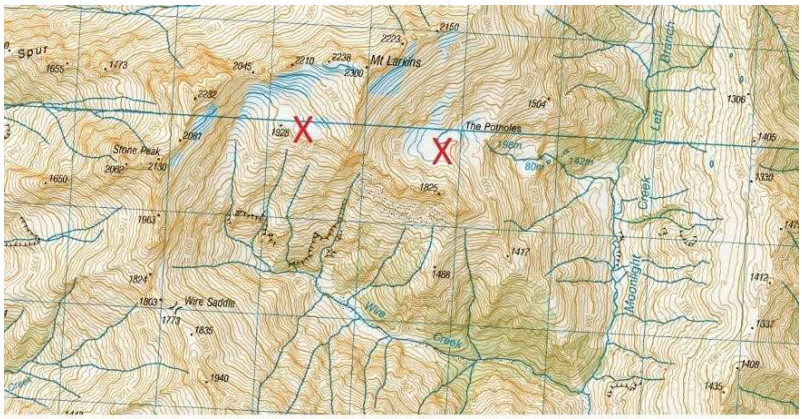
Mt Larkins

- The Shelf (South-West Side of Larkins) and
- The Pot Holes (South-East Side of Larkins)

- Freq: 119.20
- Elevation: Shelf 6,400ft, Potholes 4,100ft
- Details: Commonly used landing site. Helicopters generally approach from the Lower Moonlight Ridge to the Pot Holes, generally at an altitude below regular Milford traffic. If flying over Wire Saddle, beware of helicopters taking off or landing from 'The Shelf' landing site.

John O Groats River Mouth

- Elevation: Sea level
- Frequency: Boundary of 119.2 and 118.2
- Details: Landing site right on the edge of frequency boundary please listen on both frequencies when operating here.



Glacier Basin

- Elevation: 6,500ft
- Freq: 119.20
- Details: Commonly used, helicopters will approach from the North (returning from Milford) or from the East (Kinloch Lodge direction).

Clark Glacier

Elevation: 6500ft Frequency: 119.2
Details: Clark Glacier Bowl – Approaches made from the South East or South West depending on wind.

Tyndall Shelf

Elevation: 6500ft to 7000ft Frequency:119.2
Details: Multiple shelfs; approaches made from South or North.

Isobel Glacier

Elevation:7500ft Frequency:119.2
Details: Top end of glacier; approaches made from either
North or South West, depending on wind.

Boulder

Elevation: 1280ft
Freq: 119.2
Details: Drop off point for Heli rafters. Multiple daily flights during the winter months
Helicopters transiting between O'Connells and Boulder below 3500ft

Mt Vanguard

Elevation: 4000ft Frequency 119.2
Details: High frequency location. Multiple landing sites on west and east faces and summit. Approaches are made from the South West or South East depending on wind.

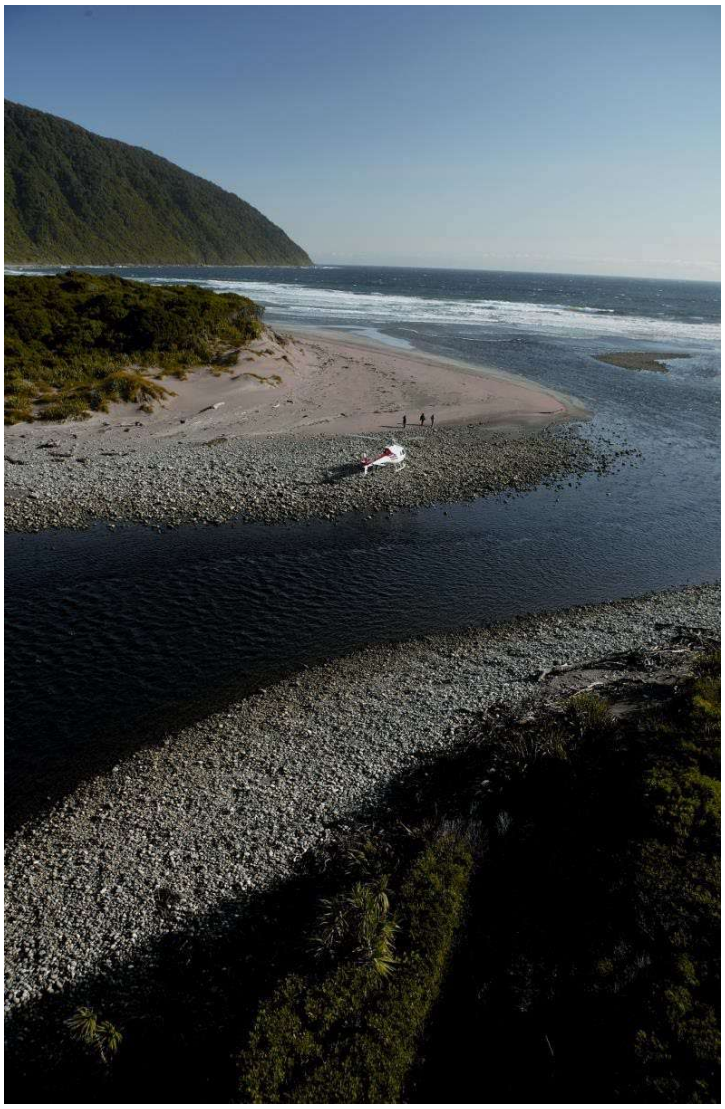
LANDING SITE

Hollyford Face (North of Harris Saddle and West of Lake Wilson)

- Elevation: 4,500ft
- Freq: 119.20
- Details: Low spur, roughly 1nm North of the Harris Saddle. Beware of helicopters taking off or landing from here if flying close to the hills along the Eastern Side of the Hollyford Valley.

Transit Beach

- Elevation: Sea Level
- Freq: 119.20 and 118.20
- Details: Helicopters approach and depart Transit Beach either from St Annes Point, from the Transit Valley, or along the coast from the South-West. For fixed wing aircraft descending Dale Point, then inbound, be aware of helicopters climbing from Transit Beach towards St Annes, as 118.20 reception can be poor and you may miss the helicopter's initial Transit Beach lifting call.



Lake Quill

- Elevation: 3,200ft
- Freq: 119.20
- Details: Helicopters land at either end of Lake Quill, be aware of this if operating low over the Sutherland Falls area.

8. COMMUNICATIONS , CFZ AND AREA QNH

- As published in the NZAIP and VNCs for this area, the Primary collision avoidance frequencies are 119.2MHz for the Fiordland CFZ and 118.2MHz for the Milford Sound CFZ.
- All Aerodromes, Airstrips and Heli landing sites within the Fiordland and Milford Sound CFZs shall use the respective CFZ frequency as their unattended frequency.
- MILFORD SOUND FLIGHTSERVICE 118.2 MHz as per section 6.1. It is strongly recommended that aircraft operating within the CFZs are radio equipped or be with another aircraft capable of making radio calls on their behalf.
- QMUG expects aircraft operating within the CFZs are transponder equipped and have their transponder operating to assist with traffic avoidance.
- All Aircraft conducting Air Transport Operations within the CFZs must be equipped with at least two VHF radios and an operable transponder.
- One Radio to be used solely for collision avoidance, 119.2 MHz or 118.2 MHz as applicable, and the second radio for company and inter-company chat.
- During peak times and especially after bad weather the CFZs can become very busy and the frequencies can become extremely crowded/overloaded at times. Every pilot must make only the calls necessary for the safe conduct of their operation on these frequencies. Pilots should try and fit calls into gaps on the radio and not just talk over other traffic calls. If necessary, report referenced to a recognized reporting point e.g. “One mile South Elfin Bay” or use similar phraseology to utilize gaps in the radio traffic.
- Altimeters are to be set to the Queenstown or Milford Sound QNH available from Queenstown ATIS (126.4) or Milford Sound Flight Service (& AWIB 134.8) respectively.
- In the absences of an accurate QNH set Airfield Elevation until an accurate QNH can be obtained.
- Pilots must remember that substantial errors can occur when transiting from one side of the Divide to the other due to the differences in barometric air pressure.
- Position reporting and standard reporting points: The use of the standard position reporting points as laid out in the AIP is mandatory.
- All aircraft conducting air transport operations within the Queenstown FIR must be equipped with at least two VHF radios. One radio is to be use solely for collision avoidance 119.2 MHz. The other for own company or inter company operations.
- Standard position reports: This should consist of aircraft call sign, position, level and next reporting point.
- Low level operations: When operating low level and climbing or descending within the valleys the use of the next reporting point is considered to be more useful in maintaining collision avoidance than the direction of travel.

9. GENERAL ENROUTE OPERATING PROCEDURES:Fiordland and Milford Sound CFZs

General

Over time there have been a series of procedures that have been adopted by the local Operators that have been put in place to improve pilot awareness, expedite the traffic flow and above all else to increase safety;

- Right Hand Rule: In general the Right hand rule applies when operating within the CFZ. Fly on the right hand side of the major valleys if direction of travel is parallel to the valley systems, unless the weather dictates otherwise. This should be extended to all saddle crossings.
- Turbulence and Wind Shear conditions: If wind conditions prevent adherence to the Right hand rule then aircraft should remain on the up wind side of the valley towards the middle of the valley and pre-fix their radio calls with the phrase 'NON STANDARD' ie '*Alpha Bravo Charlie, Kay Creek 6500', for McKeller Saddle Non Standard'*
- Traffic should be vigilant for conflicting traffic coming from the opposite direction, especially when the cloud base is low. Ensure your landing lights are on and make appropriate radio calls.
- Pilots observing operations being conducted that do not meet these requirements should initially refer the matter to a senior representative of the company concerned. See Appendix 15D - Procedures Report Form. Note; If a reportable occurrence under CAA Rule 12 is witnessed, file an Air safety Incident Report with the CAANZ
- Itinerant Traffic within the National Park. The air space encompassing the Fiordland and Milford Sound CFZs are contained within GLASS G AIR SPACE. The Fiordland CFZ for the most part is capped by the Lowest Level of Queenstown's CLASS C CTA AIR SPACE.
- Resident pilots are asked to exercise a degree of patience with regard to itinerant pilots. Work load in their cockpit may well be at a very high level with the normal demands of flying within the Queenstown Fiordland area.
- Aircraft Landing Lights: While operating within the Queenstown Fiordland Area aircraft are to operate either their landing light or taxi light to aid aircraft visibility.

Gliding Operations

Gliding operations take place within the CFZs especially during the summer months. Glider traffic is to maintain a continuous listening watch on the CFZ frequency and give regular position reports. However if a glider can not be contacted on the CFZ frequency they may well be on 133.55 MHz, the gliding chat frequency. For Gliding competitions officials are

asked to advise by NOTAM or contact by Fax / Phone those operators whose known flight routes will be in conflict with gliding traffic prior to launching.

Pilots sighting Glider traffic that is not making radio calls, should pass the glider position on to other pilots either on a company frequency or as a general call on the CFZ frequency. (Gliders are extremely hard to see against a bright snow back ground and pilots should take extreme care when known glider traffic is present)

10. NOISE SENSITIVE AREAS and NOISE ABATEMENT

Aircraft Noise: The Queenstown Milford User Group strives to maintain a fly neighbourly approach with all operations. It follows that the recommended guidelines published in the Fly Neighbourly Guide of the Helicopter Association International and other appropriate publications be applied.

Review Process: The Queenstown Milford User Group in conjunction with individual operators maintains a continual review process of all flight routes and operating procedures to ensure a minimum impact on the environment is maintained.

Pilot Training: Each member of The Queenstown Milford User Group will ensure that all of their pilots receive as part of their individual company training procedures, training in noise abatement procedures and an awareness of noise sensitive areas within the Queenstown Fiordland area

Pilot training should cover the following points;

- Company flight routes
- use of highest practical altitudes
- use of appropriate rates of descent
- use of appropriate cruise speeds
- (Helicopter) use of appropriate applications of power to avoid blade slap.
- (Aeroplanes) use of correct propeller pitch settings to ensure minimal noise pollution

Noise abatement procedures should be covered for each model of aircraft flown by the pilot. Each operator shall establish a requirement that noise abatement procedures must be a consideration in all company recurrent check and training programs.

Where ever possible flight over populated areas, private dwellings and mountain huts should be avoided. Plan flight routes which avoid known noise sensitive areas. Wherever possible

plan to cross over valleys rather than fly along them. If it is required to fly along a valley, stay as high as possible and overfly the higher mountain slopes. This will ensure the aircraft noise is absorbed and attenuated by the mountains and be less obvious to people on the valley floor.

Climbers and trampers: Flight over or close to climbers and trampers is to be avoided. During November to April large numbers of climbers frequent the peaks and glaciers of the Queenstown Fiordland for recreation and solitude. While all mountain huts and the surrounding peaks are frequented, the following areas attract particularly high numbers of users.

- Milford Walk track – West branch of the Clinton Valley, MacKinnon Pass and Arthur valley
- Hollyford Valley
- Routeburn Valley
- Greenstone and Caples Valleys
- Rees and Dart Valleys
- Homer and Gertrude saddles

Please be respectful of these users by minimising your noise impact in these areas.

Ground operations: Operators are to avoid prolonged ground idle operations when in or adjacent to any noise sensitive area.

Aircraft operations from the Glenorchy strip will employ noise abatement procedures on take off and will climb out in such a manner as to minimize noise around the town.

Aircraft Operations: The Queenstown Milford User Group supports the introduction of larger and quieter aircraft that will help reduce the noise impact per passenger flown.

Exemptions: When necessary for Search & Rescue Operations or DOC work aircraft may be operated within Noise Sensitive Areas. All reasonable care will still be taken to reduce noise as appropriate and as dictated by the nature of the operation being conducted.

In Line with the Queenstown Airport Corporation's Draft Noise Management Plan August 2010, Section 2.3; The Queenstown Milford User Group shall elect 2 members to represent the Group on the Airport Liaison Committee, ideally a representative from both Helicopter and Aeroplane operations shall be elected.

11. Operating in a Traffic Collision Avoidance System (TCAS) Environment

Pilots should be aware that when operating within Queenstown Aerodrome's Class C Airspace and near the upper limits of the Fiordland and Milford Sound CFZs their operations will be in the vicinity of TCAS equipped Aircraft, most likely in the form of ATR 72, Airbus A320 and Boeing 737. However, a number of smaller aircraft especially those operating under Instrument Flight Rules will be TCAS equipped as well.

Definitions:

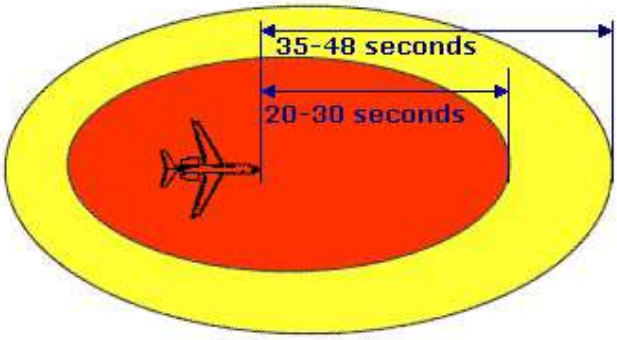
TCAS alerts the crew to conflicting traffic. The system identifies a three-dimensional airspace around the airplane where a high likelihood of air traffic conflicts exists. These dimensions depend upon closure rates between the airplane and potentially conflicting traffic. TCAS interrogates Transponders operating Mode C in other aircraft, analyzes the replies, predicts flight paths and designates possible conflicting traffic as a "*traffic aircraft*."

A Traffic Advisory (TA) is a prediction that traffic aircraft will enter the TCAS collision airspace within approximately 35 to 48 seconds. TAs are intended to assist the crew in establishing visual contact with the *traffic aircraft*. When TCAS issues a TA:

- voice alert sounds
- symbol is displayed on the crews EFIS identifying the *traffic aircraft*

A Resolution Advisory (RA) is an immediate-threat prediction that *traffic aircraft* will enter the TCAS collision airspace within approximately 20 to 30 seconds. If altitude data from the *traffic aircraft's* transponder is not available, no RA can be provided. When TCAS issues a RA:

- voice alert sounds
- Vertical guidance is displayed
- symbol is displayed on the crews EFIS identifying the *traffic aircraft*



Proximate Traffic is a *traffic aircraft* that is neither a RA nor a TA but is within:

- Six miles laterally, and
- 1,200 feet vertically
- A symbol is displayed on the crews EFIS identifying the *traffic aircraft*
- No voice alert or guidance given

From the diagram on the previous page it can be seen that even behind the TCAS equipped aircraft there is an area which should not be breached and this has been identified historically as one of the major contributing factors of TAs and RAs. Also the majority of reported RAs have not been caused by the aircraft sighted by the crew but others unseen.

Methods to avoid triggering TAs and RAs:

- Avoid flying a converging flight path with a TCAS equipped aircraft

- When cleared to "Pass behind" an aircraft on approach, allow a few extra seconds for the aircraft to clear your planned flight path before turning base or resuming your flight path, then fly a square base leg or flight path that doesn't chase the tail of a TCAS equipped aircraft to the apron, avoid converging flight paths!

- For helicopters on the ground such as at The Ledge or The Remarkables ensure your Transponder is set to Stand By.

- If there is a chance of your flight path converging with a TCAS equipped aircraft then attempt to maintain separation of at least;

  ~ 1000' vertically or 3nm laterally
  ~ Ideally 1200' vertically or 6nm laterally

Implementing these techniques will minimise if not completely alleviate the occurrence of TAs and RAs in the Queenstown FIR.

12. APPENDICES

- **12.A Queenstown Milford User Group Constitution**
- **12.B Procedures Report Form**
- **12.C User Group Memorandum of Understanding**
- **12.D Employees Signature Sheet**

12.A Queenstown Milford User Group Constitution

Purpose of User Group - Operations

- The purpose of the Group is to facilitate development, co-ordination and education of aviation procedures for the safe use of airspace and aerodromes within the Queenstown/Fiordland area and enhance aviation safety overall

- The QN/MF User Group comprises aviation operators who operate in or are based within the Queenstown/Fiordland area. Membership is open to all aviation organisations and individuals who are involved in the aviation industry. Membership is accepted once an appropriately completed application form is submitted to the Secretary. A list of current members is to be maintained by the Secretary and is to be made available on request to other members. The object of the Group is to facilitate development, co-ordination and education of procedures for the safe use of airspace and aerodromes within the Queenstown/Fiordland area and enhance aviation safety overall.

- The CAA's South Island Field safety Advisor- operations (or equivalent CAA representative) will participate in meetings to provide a channel of direct communications with CAA

Purpose of User Group – Commercial

- The purpose of the group is to provide advice, assistance and resolution to commercial matters pertaining to aviation operations. Membership is available by invitation only to affected parties.

Procedure Development – Operations Group

- Procedures proposed by the User Group are to be in the interests of safety, **not the commercial interests of the participants.**

- Procedures will be based on standard aviation operating practices and will be generated in consultation with members of the User Group and other interested parties as necessary.

- Operational Managers Group has the authority to 'enact' procedures if they agree by 75% majority vote or otherwise the Full User Group by majority vote.

- Procedures will be promulgated only for safety purposes. User group members in particular must be familiar with the promulgated procedures and comply with them. Good airmanship is to be expected.

- All Procedures will be public and published in the AIPs, VTCs, Memorandums of Understanding, User Group Minutes and this Constitution as appropriate.

- Whether procedures will be mandatory or advisory will be determined on a caseby-case basis. Any User Group member who does not agree with a decision regarding whether or not a procedure should be mandatory is entitled to refer the issue to an appropriate CAA representative *[e.g. the South Island Field Safety Advisor or equivalent].* The CAA's determination on the issue will be binding on all members. The Operational Managers Group will regularly review procedures at intervals of not greater than 5 years or whenever deemed necessary from either; incident or other airspace changes.

Administration

Officers

- The User Group Operations will appoint a Chairman from their number by majority vote at a meeting annually. The group will also appoint two safety officers by majority vote – a fixed wing and helicopter safety officers.

- The User Group Commercial will appoint a Chairman from their number by majority vote at a meeting annually.

- The Commercial and Operations Group shall appoint a common Secretary by majority vote at a meeting annually.

- The quorum for User Group meetings shall be 20% representation of current member organisations.

Meetings

- The Chairman – Operations, is responsible for calling two Aviation staff meetings per year and additional meetings when reasonably required to address issues or develop procedures. The secretary is to produce meeting agendas and circulate minutes.

- There shall be a minimum of three Operational Managers Group Meetings per year at times to be agreed by the members of those groups.

- The Chairman – Commercial, is responsible for calling meetings as required.

- Any Sub committee established shall meet and report as required.

- Quorum numbers shall be taken from the effective membership list as at the date of the Annual General Meeting

Spokesperson

- The Chairman – Operations is to be the public spokesperson for the User Group, or other persons delegated this responsibility by the Chairman – Operations. No other person may claim to represent the User Group as spokesperson for the purpose of public statement.

Finance

- The User Group – Operations will not levy subscriptions but may raise funds and have a bank account for sponsorship or funds that may be obtained.
- The User Group – Commercial shall levy members as required to cover expenses incurred in response to functions carried out
- The User Group account will require countersigning by the Chairman - Operations, Chairman – Commercial and/or Secretary

Liability

- All User Group members acknowledge that the Officers and other members of the User group are performing any roles and responsibilities in connection with the User Group on a voluntary basis and in good faith. In the absence of wilful default, no member or Officer shall have any liability to any other member or Officer whether in contract, tort or otherwise, for anything associated directly or indirectly with that member or Officer's involvement in, or performance or nonperformance of any role or responsibility as part of, the User Group.

Structure of User Group - Operations

Operational Managers Group

Participants: - Chairman of the User Group
- Chief Pilots or Airline Representatives
- Airways NZ Representative
- QAC Representative
- CAA Field Safety Adviser South Island
- Other parties as invited by the Chairman i.e. DoC, MoT, AVSEC, Police, Border Control Agencies

- The quorum for meetings is 50% of member organisations when procedures are either amended or enacted or policy adopted or otherwise 20% representations from member organisations.

Purpose

- Identify any safety concerns, investigate and recommend solutions to a company and/or CAA.

- Discuss and agree on by vote:

- Policy	75% Majority, one vote per organisation
- Recommended procedures	75% Majority, one vote per organisation
- Safety initiatives	50% Majority, one vote per organisation
- Awareness programs	50% Majority, one vote per organisation

- This group has overall responsibility for management of, and determination of the objectives and goals of, the QN/MF User Group

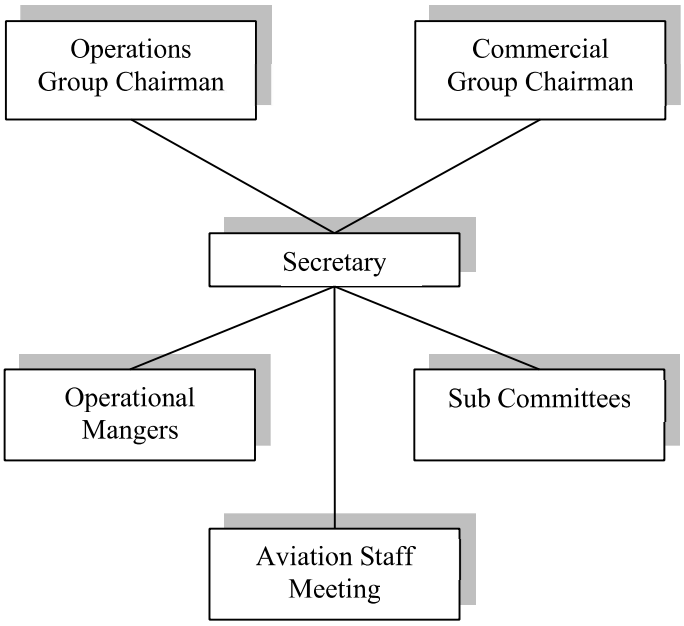
Aviation Staff Meeting

Participants

- All User Group members and staff

Purpose

- Education
- Notification of any changes to procedures
- Social



12.B Procedures Report Form

Use this form for both positive and negative feedback on procedures

Aircraft / Company involved: _____

Date & Time: _____

Location: _____

Procedure: ☐ Arr/Dep Procedure ☐ Enroute Procedure

(Tick box) ☐ Joining Procedure ☐ Position Reporting

☐ Environmental Procedure ☐ Parking

☐ Runway Separation ☐ Passenger Handling

☐ Refuelling ☐ Taxiing

☐ Airmanship ☐ ATC ☐ AFIS

☐ Other (specify)

Event observed: _____

Reporting Organisation: _____

To: _____ *Safety Officer or Senior Pilot of Company involved*
(Name of Safety Officer/ Senior Pilot if known)

Please supply written comments back to the reporting organisation and User Group Chairman on reasons for this action. Note: If this is a reportable occurrence under CAA Rule Part 12, file an Air Safety Incident report with CAA.

Sent to: ☐ Company Involved ☐ QMUG Chairman / Secretary
Date ___/___/_____ Date___/___/_____

12.C User Group Memorandum of Understanding

MEMORANDUM OF UNDERSTANDING BETWEEN COMMERCIAL HELICOPTER AND FIXED WING OPERATORS IN THE QUEENSTOWN/FIORDLAND AREA

OBJECTIVE:

To establish standard operating procedures, guidelines and position reporting points for operations in the Queenstown/Fiordland area.

PROCEDURES:

- All pilots operating in the Queenstown/Fiordland area are to be familiar with the content of this User Group Hand Book.
- The contents of this Hand Book are S.O.Ps if, however, weather conditions or other operational concerns require differing procedures then pilot's discretion is necessary.

12.D Employee Signature Sheet

Company Name		
An Employees signature indicates they have read and understood this Hand Book		
Employees Name	**Signature**	**Date**
