



VATNZ BRIEFING FOR
OPERATION DEEP
FREEZE

VATSIM New Zealand

V1.2 November 2020

Contents

Document Control.....	2
Scope.....	2
Airspace.....	3
NZZO	3
NZZC.....	5
NZCM	10
Scenery.....	11
Conclusion.....	12

Document Control

VATNZ BRIEFING FOR OPERATION DEEP FREEZE		
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Date:	Version	Description
10 th November 2020	0.1	- Initial Draft
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11 th November 2020	0.3	- Updates to include all VSOAs participating in ODF
11 th November 2020	1.0	- First Release
11 th November 2020	1.1	- Example and Edit Changes
15 th November 2020	1.2	- Edit Changes

Scope

This briefing aims to give pilots participating in Operation Deep Freeze the required knowledge to fly in New Zealand airspace (NZZO, NZZC, NZCM) smoothly and efficiently. This briefing also aims to introduce pilots participating in Operation Deep Freeze the differences of flying in New Zealand airspace and what they can expect from ATC as well as what is expected from pilots participating in Operation Deep Freeze when communicating with ATC from VATNZ.

Airspace

NZZO


The New Zealand Oceanic region (NZZO FIR) is New Zealand's oceanic control unit. It is an oceanic procedural environment which exists from FL245 to FL600. Furthermore, NZZO_FSS (Auckland Radio) is Class A airspace meaning that you must be IFR when flying through their airspace. In New Zealand, oceanic airspace is supported by HF Radio which is long-range radio capability's which mean that the radio waves bounce off the ionosphere. Therefore, this means HF radios it produces a static sound like an old TV with no signal.

Some things that you should know how to do inside and out in oceanic airspace are:


- Position Reports
- Speed Techniques and how to reduce speed in Mach numbers
- How to read VOR/NDB distance on your display or FMC


To help pilots participating in Operation Deep Freeze, VATNZ has an oceanic position reporting tool which will help you create your position reports. This can be found here <https://www.vatnz.net/pilots/oceanic-report-tool/>. Pilots participating in Operation Deep Freeze should note that unlike the KZAK FIR where it is a requirement to read out your Mach Number and Ground Speed, in the NZZO FIR, it is not a requirement to read this out in your position report unless you have been assigned a speed restriction. An example of a position report with Auckland Radio can be found below.

Example:

 "Auckland Radio, RCH9987, position"

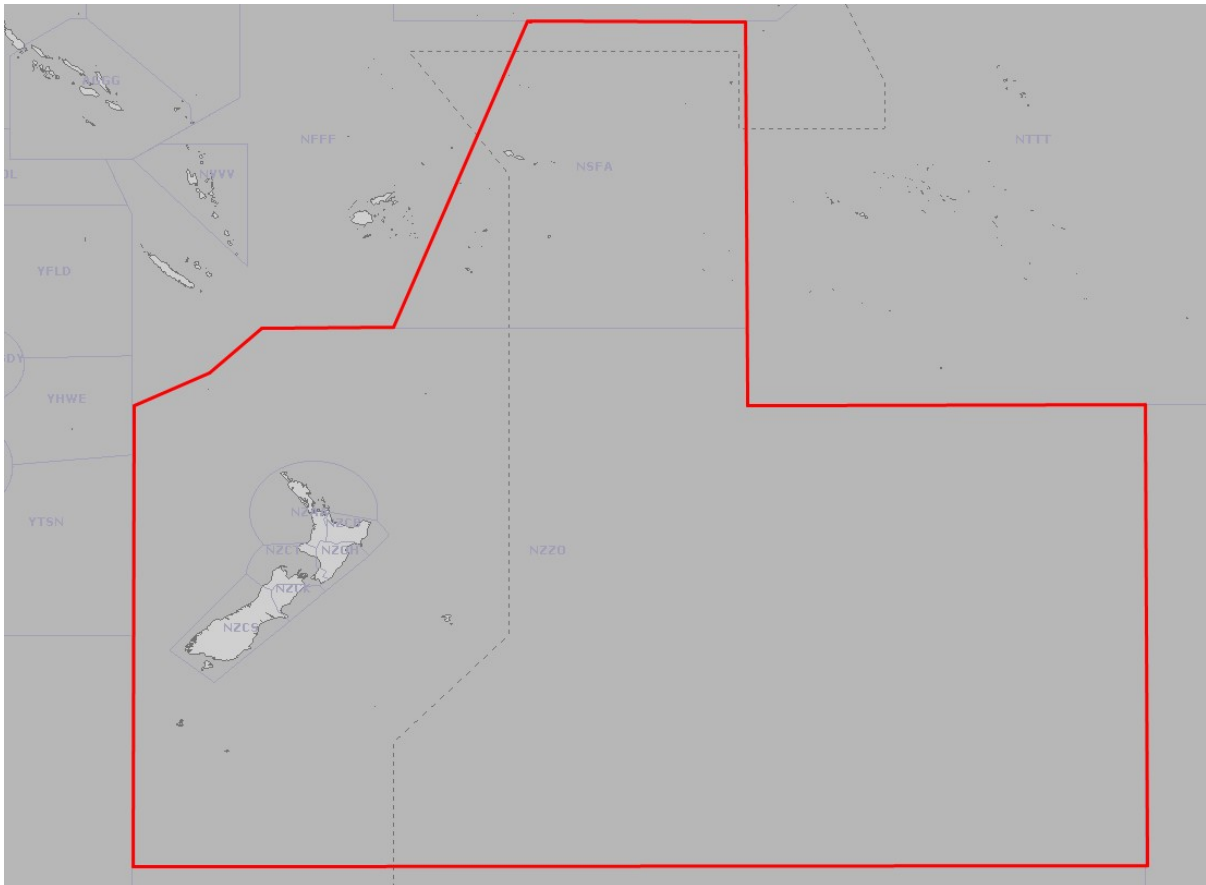
 "RCH9987, Auckland go ahead"

 "RCH9987, position SELKA time 1834z, FL360, Estimating MOMTA 1946, REPOL next."

 "RCH9987, Auckland accepts primary this frequency, standby for SELCAL check."

Wait for SELCAL

 "SELCAL checks okay, RCH9987"



(Image 1: NZZO FIR & Coverage of Auckland Radio)

In conclusion, if NZZO_FSS is online, pilots should provide a position report to this controller and pass the following information in a position report when asked by the controller.

- 1) Aircraft Identification (Callsign)
- 2) Position (Waypoint)
- 3) Time (In Zulu time, ensuring that you have set your Zulu time correctly)
- 4) Flight level, including passing level OR cleared level if not maintaining the cleared level
- 5) Next position and time over the waypoint
- 6) Ensuing significant point (Waypoint thereafter)

Furthermore, VATNZ highly recommends that pilots have SELCAL code located in their flightplan (SEL/ABCD) ensuring that they have connected with their SELCAL when connecting to the VATSIM network. Lastly, please do not forget that if NZZO_FSS is OFFLINE and a domestic controller is ONLINE, please contact the enroute controller TWO MINUTES BEFORE THE NZZC FIR BOUNDARY. If you require any more oceanic procedures clarification, you can first look at the Pacific Oceanic Agreement website (<https://pacificoceanic.vatsim.net/>), the VATNZ website (www.vatnz.net), or email the ATC Training Department at atctraining@vatnz.net.

NZZC

The NZZC FIR is the domestic FIR for New Zealand. Within the NZZC, there are two different classes of airspace, Class C and Class D. For further readings on New Zealand domestic airspace pilots should read the New Zealand CAAs book <https://www.aviation.govt.nz/assets/publications/gaps/gap-new-zealand-airspace-web.pdf>.

In this section of the briefing, pilots will be briefed on the different classes of airspace, VATNZ enroute controllers, STARS & SIDs out of NZCH, IFR Clearances, and other information that pilots participating in Operation Deep Freeze will find useful when flying in New Zealand airspace.

NZZC FIR & Enroute Sectors

Firstly, it is important to know that in New Zealand our centre controllers are called “Control”, **NOT** “Centre”. Our enroute sectors are as follows:

- NZAA-R_CTR – (Pronounced “Auckland Control”)
- NZAA_CTR - (Pronounced “Auckland Control”)
- NZCH-T_CTR - (Pronounced “Christchurch Control”)
- NZCH-K_CTR - (Pronounced “Christchurch Control”)
- NZCH-S_CTR - (Pronounced “Christchurch Control”)
- NZOH_CTR - (Pronounced “Ohakea (“O-HA-KEY-A”) Control”)
- NZCH-B_CTR - (Pronounced “Bay Approach”)

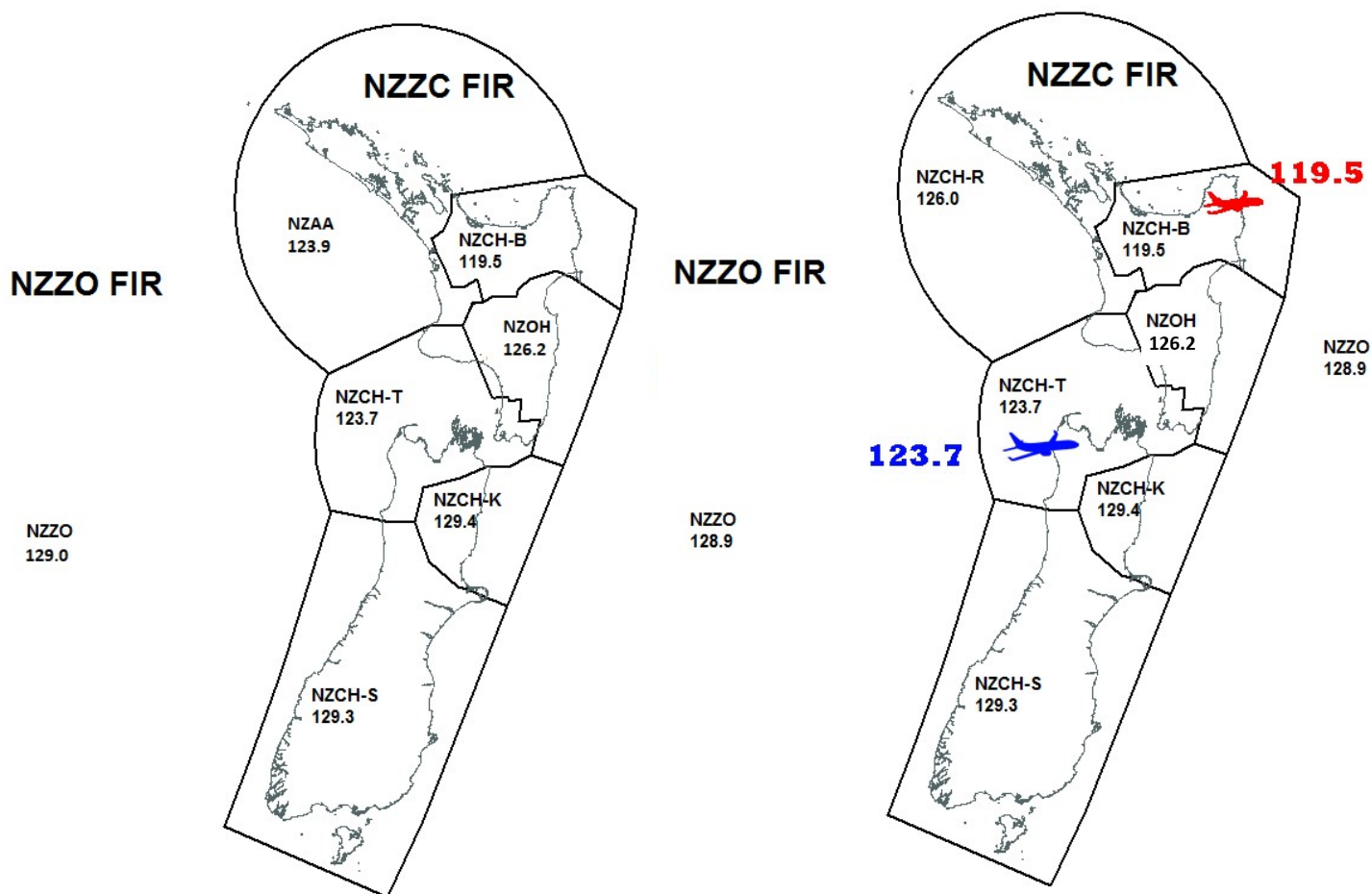
Which Controller do I call for a clearance? Sometimes there is no local aerodrome controller online, particularly at some New Zealand provincial airports.

Frequently there are Centre, or what we term Area Controllers online controlling large areas of airspace. So, when this occurs who is the best controller to call for a clearance?

The diagram below shows the airspace covered by each Centre Controller. Some things to note are:

- NZAA automatically extends to cover NZCH-B when NZCH-B is not online
- NZCH-T automatically extends to cover NZOH when NZOH is not online
- Controllers in VATNZ can extend the entire country and cover every frequency in the NZZC. Therefore, if pilots get a ‘Contact Me’ from a controller on 119.5 MHz but do not see this controller online, please contact that controller on the frequency in the contact me. More information on this on the next page.

An enroute controller in New Zealand has the ability to provide extended services to any enroute sector within the NZZC. Therefore, this means that a C1+ rated controller within VATNZ can extend the entire NZZC FIR if they so wish to do so. Audio for VATSIM (AFV) means that an enroute controller can provide extended services on another frequency. Therefore, this means that when controlling multiple sectors, enroute controllers have more than one frequency that aircraft can contact them on. For example, when a controller is controlling NZOH_CTR, an aircraft outside of 126.200 section need to be on the frequency shown below e.g., the red plane should contact the controller on 119.50 and the blue plane should contact them on 123.700. Using the same example, for the red plane on 119.5 would call the controller "Bay Approach" and "Christchurch Control" for the blue aircraft. This is also whilst still being on Ohakea Control as the sector the controller is logged on as. Furthermore, NZAA_APP & NZWN_APP control up to FL600, therefore, if you receive a 'contact me' from these controllers please contact them and treat them as an enroute controller.



Crossing from the NZZO - NZZC or NZZC – NZZO:

As said under the NZZO section of this briefing, pilots crossing from the NZZO to the NZZC should contact or change frequency TWO MINUTES before crossing the boundary into the NZZC. However, when crossing from the NZZC into the NZZO, pilots should contact/change to the correct frequency overhead the waypoint boundary into the NZZO.

Christchurch (NZCH)

Christchurch (ICAO: NZCH; IATA: CHC) is New Zealand's second-largest airport and the primary arrival point for air travellers visiting the South Island. It is also the main forward base of operations for the flight programme to McMurdo Sound in Antarctica.

It has three runways: Runway 02/20, a parallel grass runway 02/20 Grass, and the cross runway 11/29. As in real life, runway 02/20 receives the vast majority of traffic in the online world. Runway 11/29 is not used in heavy traffic situations due to a significant misalignment of that runway between the FS9 and FSX sceneries.

Arriving at NZCH

Seal Runways 02 and 20 are equipped with ILS and all of the NZCH arrival procedures feed into these approaches. All STARs are now RNAV only. Pilots unable to fly the RNAV arrivals should indicate this in their flight plan and inform controllers on initial contact in order to receive vectors to the ILS approach.

Flights arriving at Christchurch from Antarctica can expect to be assigned one of the following STARs depending on the active runway.

- Christchurch Runway 02: [PEHRR FOUR ALPHA ARRIVAL \(PEHRR4A\)](#).
- Christchurch Runway 20: [PEHRR FOUR BRAVO ARRIVAL \(PEHRR4B\)](#).

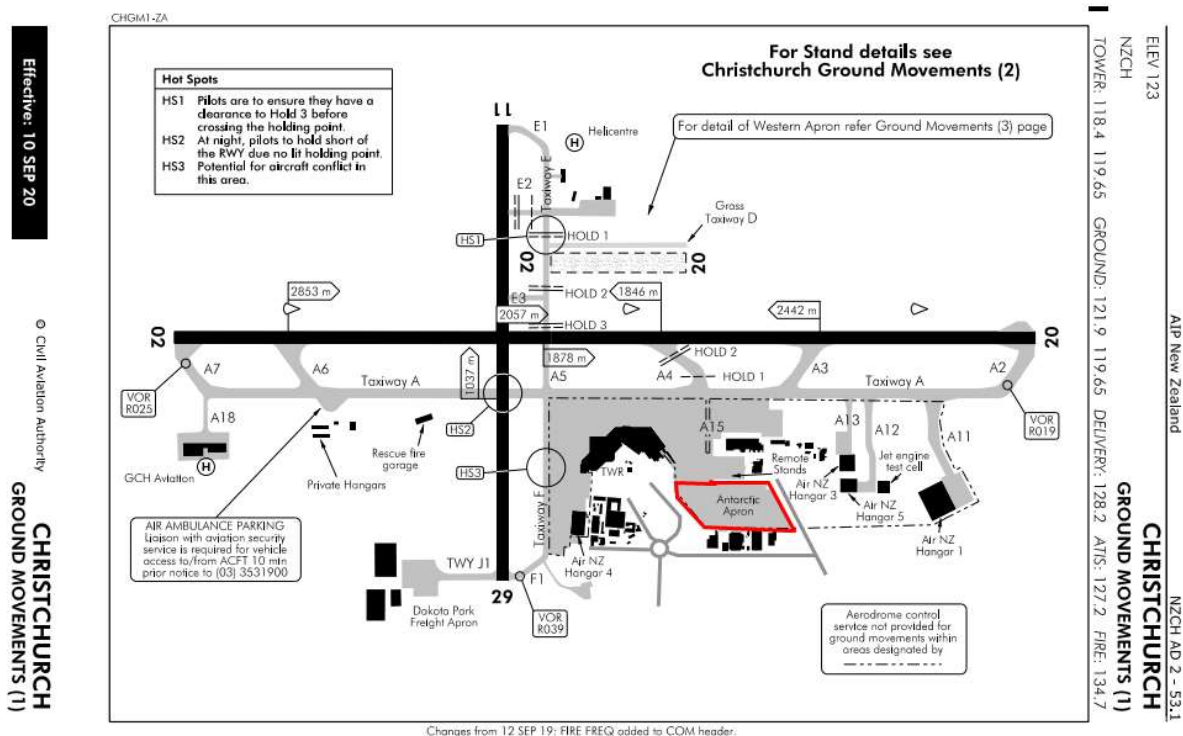
Flights arriving at Christchurch from the north can expect to be assigned one of the following STARs depending on the active runway.

- Christchurch Runway 02: [PEAKS SEVEN ALPHA ARRIVAL \(PEAKS7A\)](#).
- Christchurch Runway 20: [PEAKS EIGHT BRAVO ARRIVAL \(PEAKS8B\)](#).

Furthermore, pilots should also note that in New Zealand we follow ICAO conventions, therefore, aircraft will readback “RUNWAY ZERO TWO (02)” instead of “RUNWAY TWO (2)”.

Pilots should note a few things after being cleared for an approach in New Zealand. When cleared for an ILS/DME approach, pilots are required to report established on the ILS/DME. Furthermore, if pilots are cleared for an RNAV approach, it is required to report the initial approach fix (IAF) as well as the final approach fix (FAF) if landing clearance has not yet been given. Instructions on a visual approach, VOR/DME approaches will be issued by the controller.

Once pilots have arrived in Christchurch if NZCH_GND is online, pilots should change to the ground frequency without a prompt from the controller on 121 DECIMAL 9 (121.9) (please do note that it is decimal NOT point in New Zealand under ICAO convention). However, if GND is not online, then pilots should report clear of the runway to the controller. Pilots participating in Operation Deep Freeze, can expect taxi clearance to A15, Antarctic Apron (shown on aerodrome chart on the next page).



Departing NZCH

Flights departing Christchurch for Antarctica can expect to be assigned one of the following departures depending on the active runway.

- Christchurch Runway 02: [MUKVO ONE PAPA PEHRR TRANSITION \(MUKVO1P.PEHRR\)](#).
- Christchurch Runway 20: [ATSAT ONE QUEBEC PEHRR TRANSITION \(ATSAT1Q.PEHRR\)](#).

Flights departing Christchurch for leaving the NZCC to the north can expect to be assigned one of the following departures depending on the active runway.

- Christchurch Runway 02: [GUTBU ONE PAPA \(GUTBU1P\)](#).
- Christchurch Runway 20: [PEDMI ONE QUEBEC \(PEDMI1Q\)](#).

IFR Clearances

Before acquiring IFR clearance, pilots must make sure that they have the airports ATIS if it is being provided by a controller. This means that controllers will not have to read the METAR out to pilots.

When requesting IFR clearance, pilots must make sure that you establish the comms first. An example of this would be your callsign followed by the ATC Position that you are calling e.g., “Christchurch Delivery, RCH9987”. When acquiring IFR clearance pilots must ensure that the following items are included in your clearance in this order:

- Location e.g., Stand Number or where you are on the aerodrome (Alpha 15)
- ATIS with QNH (e.g., Charlie 1015)
- Destination Aerodrome (NZIR, NZPG, NZFX etc.)
- Requested Level

Example:



“Christchurch Delivery, RCH9987 Kilo, 1014”



“RCH9987, Christchurch Delivery Kilo 1014 confirmed”



“RCH9987 Antarctic Apron, request airways clearance to Pegasus Field, FL310”



“RCH9987, cleared to Pegasus Field via flight plan route, MUKVO ONE PAPA departure, PEHRR transition, squawk 0216”



“Cleared to Pegasus Field via flight plan route, MUKVO ONE PAPA departure, PEHRR transition, squawk 0216, RCH9987”



“RCH9987 Readback correct.”

Furthermore, it is important to note that in New Zealand there is no initial climb. However, pilots must read the SID chart to ensure they are complying with all ATC speed restrictions on the chart as well as climb gradients. Therefore, this means that pilots may climb to their cruise level airborne without clearance from ATC.

Push and Start

All pilots participating in Operation Deep Freeze should note that it is a requirement in New Zealand to call ATC and gain permission before pushing back and starting the engines.

Take-off

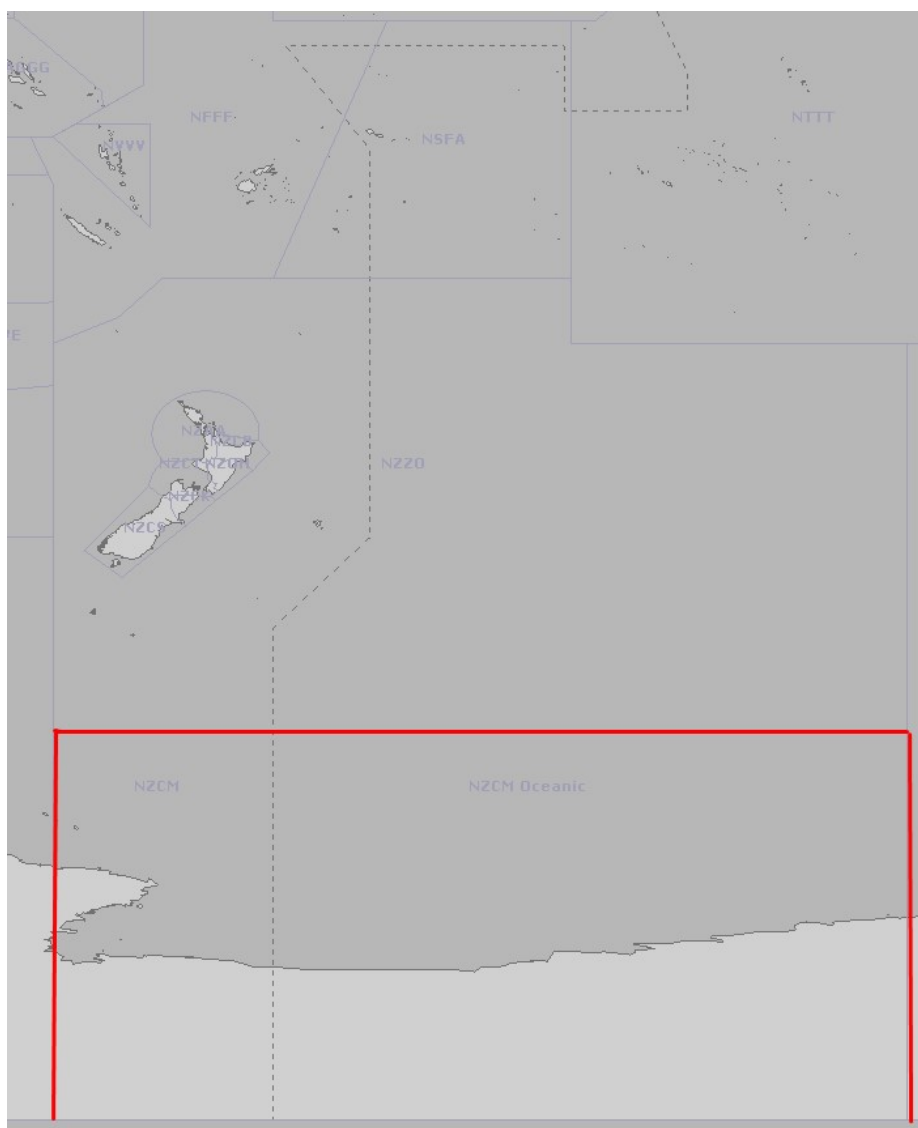
In VATNZ airspace, pilots are expected to change to the approach controller as soon as they are airborne and before 1500ft. In the AIP this is said by, “Contact Christchurch Approach 120.9 MHz as soon as practicable prior to 1500ft, or as instructed”. As this is VATSIM, pilots should change to the next radar controller. Remember, if in doubt, ask the controller.

NZCM

Within the NZCM FIR (McMurdo FIR), VATNZ has jurisdiction over the ATC positions and airspace. If there are members of a VSOA that are VATSIM C1+ rated who wish to provide ATC services and are not a part of the Pacific Oceanic Agreement, they must get in contact with the VATNZ ATC Training Department at atctraining@vatnz.net.

Air Traffic Control in the NZCM FIR is a flight information service as well as an oceanic service much like Auckland Radio within the NZZO. These positions are McMurdo Radio (NZCM_FSS): 128.700 MHz and Ice Tower (NZIR_TWR): 126.200 MHz.

Below is a diagram of where NZCM_FSS has jurisdiction over. NZCM_FSS exists between FL245 and FL600 inclusive, therefore, any pilot operating within these altitudes must get in contact with the controller on that frequency. Controllers on NZCM_FSS will once again be following ICAO convention and, therefore, examples located within the NZZO section of this briefing will apply.



Scenery

- **ORBX New Zealand - North Island** FSXP3D Payware
This package, [available here](#), provides stunning high-res scenery for all of New Zealand's North Island (including Christchurch Airport).
- **ORBX New Zealand - South Island** FSXP3D Payware
This package, [available here](#), provides stunning high-res scenery for all of New Zealand's South Island (including Christchurch Airport).
- **Real New Zealand NZCH/Christchurch** FSXP3D Payware
This package, [available here](#), provides stunning high-res scenery as well as realistic scenery for Christchurch.
- **Christchurch International Airport v1.3** FSXP3D Freeware
For those FSX pilots looking for a freeware option, [this scenery](#) by Troy Chapman replaces Christchurch Airport (NZCH).
- **Christchurch International (NZCH)** FS9 Freeware
A freeware FS9 scenery for Christchurch (NZCH), [available here](#), by Alistair Slee, Jason Hunt, and Ian Warren.
- **Christchurch** X-Plane Freeware
This package, [available the X-Plane Scenery Gateway](#), provides an accurate rendering of Christchurch (NZCH) airport.
It was originally included in the default scenery for X-Plane 10.40. The latest version has yet to be included in the default scenery for X-Plane.
- **Antarctica X** FSXP3D Payware
This package, [available here](#), provides stunning scenery for Antarctica and is a must-have for realistic flying in Antarctica.
- **Antarctica Mega Scenery** X-Plane Payware
This package, [available here](#), provides stunning scenery for Antarctica and is a must-have for realistic flying in Antarctica on X-Plane.

Conclusion

In conclusion, from everyone at VATNZ, we wish all VSOAs all the best for Operation Deep Freeze, 2020 and we cannot wait to see you flying around our skies once again. If you have any questions regarding flying within New Zealand and cannot find the information on the VATNZ website, feel free to send the ATC Training Department an email at atctraining@vatnz.net. Furthermore, if you have any feedback at all please email us at atctraining@vatnz.net as well to pass your thoughts.

Good luck for Operation Deep Freeze, 2020!

- The team at VATSIM New Zealand