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**2018 Nelson and Marlborough airspace  
review  
Final airspace changes**

# Table of Contents

<b>Introduction .....</b>	<b>1</b>
<b>Overview of submissions.....</b>	<b>2</b>
<b>Airspace changes .....</b>	<b>2</b>
Controlled airspace.....	3
1. Nelson control zone .....	5
2. Nelson control areas .....	7
3. Woodbourne control area .....	9
4. General aviation areas.....	10
Other airspace changes .....	10
1. Visual reporting points .....	10
2. Mandatory broadcast zones .....	11
3. Common frequency zones.....	11
4. Chart symbols.....	12
<b>Consultation .....</b>	<b>12</b>
<b>Final submissions.....</b>	<b>14</b>
<b>Further information.....</b>	<b>15</b>
<b>Appendix A – final controlled airspace changes.....</b>	<b>16</b>
<b>Appendix B – amended Motueka MBZ and new Tasman CFZ .....</b>	<b>17</b>

Note: Unless otherwise stated, all heights referenced in this document are above mean sea level (AMSL).

## Introduction

This review has compromised all the airspace over the South Island detailed on the C7 and C9 visual navigation charts covering the area north of line between Karamea aerodrome – Murchison aerodrome – Hanmer Springs aerodrome – Conway river mouth.

Initial notification of the review was made in June 2017 and users were invited to make submission for desired airspace changes by 15 September 2017.

Submissions were received from 11 organisations or individuals by the cut-off date. A summary of the submissions was published on 8 November 2017.

At the time submissions closed, Airways was still designing the PBN procedures and was unable to provide final design changes, if any, to existing controlled airspace.

The first submission was received from Airways on 20 December, and this was superseded by an amended submission on 11 January 2018. Subsequent consultation with users was commenced on 12 January based on the amended submission. Cut-off for submissions was 1 March 2018.

A consultation meeting with users was held on 22 February at Airport House, Nelson Airport which was attended by 16 people.

For full details and background information of the proposed airspace changes, refer to the following documents available online:

- CAA consultation documents:
  - § '2018 Nelson and Marlborough Airspace Review – Subsequent consultation' (<http://www.caa.govt.nz/assets/legacy/airspace/2018-Nelson-Marlborough-subsequent-consultation.pdf>); and
  - § '2018 Nelson and Marlborough Airspace Review – Summary of submissions' (<http://www.caa.govt.nz/assets/legacy/airspace/2018-Nelson-Marlborough-Summary.pdf>); and
- Airways' petitions:
  - § 'Airways New Zealand submission to the Civil Aviation Authority's 2018 Nelson and Marlborough Airspace Review' (<http://www.caa.govt.nz/assets/legacy/airspace/Airways-submission-2018-Nelson-Marlborough-CTR-CTA-proposal.pdf>); and
  - § 'Airways New Zealand updated submission to the Civil Aviation Authority's 2018 Nelson and Marlborough Airspace Review' (<http://www.caa.govt.nz/assets/legacy/airspace/Updated-Airways-submission-2018-Nelson-Marlborough-CTR-CTA-proposal-12-Apr-2018.pdf>)

On 13 April 2018, Airways advised CAA that following receipt of the final instrument sector boundary coordinates some further minor changes are necessary to the boundaries advised on 12 February 2018. These changes are detailed below.

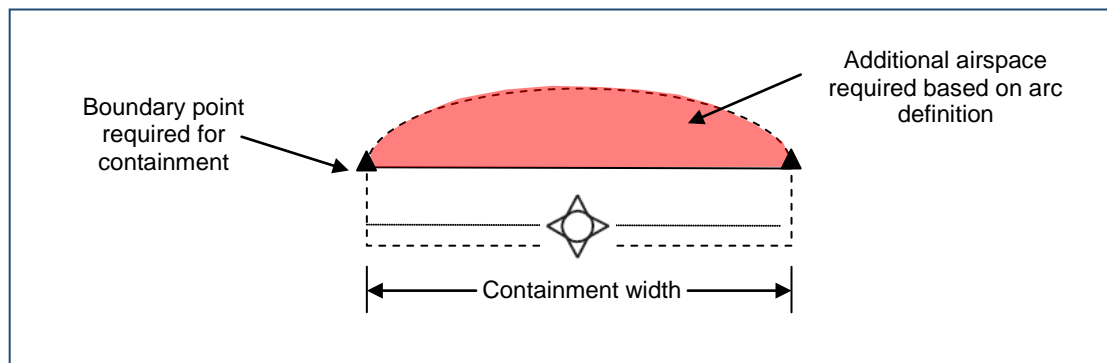
## Overview of submissions

Submissions were received from seven organisations or operators (one organisation made two submissions). There were no strong objections to the proposed changes, though one submitter expressed concern about the complexity of the proposed airspace and asked for new control area boundaries to the south-west of Nelson to be defined by using arc distances from Nelson.

**CAA comment:** *Defining a rationalised airspace boundary between two points, instead of arc distances from Nelson VOR/DME, has enabled in the raising of the lower limit of existing controlled airspace in some locations. It has also resulted in less extraneous airspace than otherwise would have been required in those areas where the controlled airspace has been lowered. Refer to Figure 1.*

*Boundaries based on arc distances have been used to the north, as this area is over water and there are no geographical features readily available for navigational reference.*

*Some of the 'kinked' boundary lines to the south of Nelson, in the vicinity of the CTAs with lower limits of 5500 ft and 6500 ft, were designed by Airways at the request of users to allow hang gliders and paragliders to utilise areas of lift around a launch site at Inwoods Lookout.*



**Figure 1 – airspace boundary design**

## Airspace changes

The following airspace changes are proposed.

## Controlled airspace

Controlled airspace is designated in portions of airspace where the Director has determined that an air traffic control service is required to be provided in accordance with the airspace classification – Classes A, B, C, D and E<sup>1</sup>.

- A control zone (CTR) is controlled airspace extending upwards from the surface to a specified upper limit.
- A control area (CTA) is controlled airspace extending upwards from a specified lower limit above the earth.

The boundaries of controlled airspace are designed solely to protect IFR routes and procedures.

Controlled aerodromes are established where the Director determines an aerodrome control service is required. Aerodrome control service is an air traffic control service for all aerodrome traffic.

*Note — the term ‘controlled aerodrome’ indicates that air traffic control service is provided to aerodrome traffic but does not necessarily imply that a control zone exists.*

- **aerodrome traffic** means—
  - (a) all traffic in the manoeuvring area of an aerodrome; and
  - (b) all aircraft flying in the *vicinity of an aerodrome*
- **aircraft flying in the vicinity of an aerodrome** means any aircraft that is in, entering, or leaving an *aerodrome traffic circuit*
- **aerodrome traffic circuit** means the pattern flown by aircraft operating in the *vicinity of an aerodrome*

Aircraft operating at a controlled aerodrome are issued clearances, instructions and information to prevent collisions between aircraft flying in the vicinity of an aerodrome and between aircraft and vehicles, personnel and objects on the manoeuvring area.

Rule 71.55 allows the Director to designate a control zone around an aerodrome if an aerodrome control service or an aerodrome and approach control service is required if the traffic density and pattern requires the controlled airspace. Primarily this is done where the number of regular passenger transport operations takes place over service level thresholds.

Rule 71.55(b) requires the CTR to be as small as practicable to protect the flight paths of IFR flights arriving at and departing from the aerodrome.

Additionally, the lateral limits of a CTR must –

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<sup>1</sup> CAR 71.51(a), ICAO Annex 11, Doc 4444

- Encompass the paths of IFR aircraft arriving and departing under IMC
- Extend at least 5 NM from the centre of the aerodrome, in the direction from which instrument approaches may be made
- Take into account the category of IFR aircraft using the aerodrome.

CTRs are not designed to protect VFR flight paths and procedures. IFR aircraft conducting a visual approach are not flying an instrument procedure and pilots are responsible for their own containment within controlled airspace.

An approach control service is an ATC service for arriving and departing controlled flights.

A controlled flight is a flight requiring an ATC clearance.

The Director has determined that approach control services are required for aircraft arriving at and departing from Nelson aerodrome. An approach control procedural service within controlled airspace below 9500 ft is provided by Nelson. Taranaki and Kaikoura Sectors, based in Christchurch, provide an area control procedural and surveillance services in CTA above 9500 ft.

Nelson Tower is certificated to provide aerodrome control and approach control procedural services only.

The CTR and CTA in the Nelson and Marlborough review area is Class D airspace below 9500 ft. Within Class D airspace, the air traffic service is provided to IFR and VFR aircraft is shown in Table 1 below:

*Table 1 – air traffic service provision in Class D airspace*

Type of flight	Separation provided	Service provided	ATC clearance required
IFR	IFR from IFR	Air traffic control service, traffic information about VFR flights (and traffic avoidance advice on request)	Yes
VFR	Nil	IFR/VFR and VFR/VFR traffic information (and traffic avoidance advice on request)	Yes

As shown in Table 1, VFR aircraft are not separated from either IFR or VFR aircraft within Class D airspace.

While a flight information service is an intrinsic component of ATC service, ATC functions have overall priority.

## 1. Nelson control zone

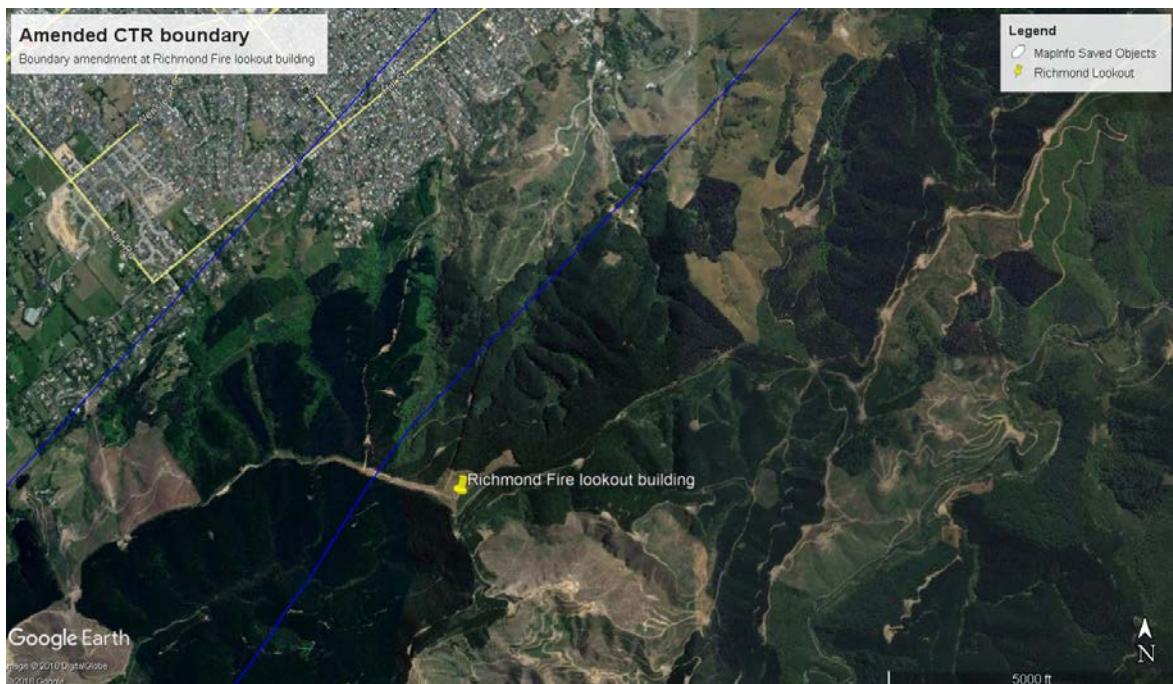
There has been no negative feedback to the proposed changes to the smaller Nelson CTR.

The New Zealand Hang Gliding and Paragliding Association (NZHGPA) and the Tasman and Hang Gliding Paragliding Club (THGPC) supported the changes as it would enable improved access to the Barnicoat Range, east of Nelson, a longstanding location used by hang glider and paraglider pilots. A concern was expressed that access to landing sites at Ngawhatu Road and Saxton Field would no longer be available.

At the consultation meeting, Airways confirmed that the existing memorandum of understanding (MoU) between the organisations allowing access to the Nelson CTR by non-transponder equipped hang gliders and paragliders would remain and be updated to reflect the airspace changes. Airways, NZHGPA and THGPC will liaise on the required amendments to the MoU.

NZHGPA and THGPC inquired if it would be possible for the eastern boundary of the CTR to be adjusted to place the Richmond Fire lookout building outside the CTR. This would help pilots to avoid descending unintentionally into the CTR and provide the opportunity to thermal back up in uncontrolled airspace.

Airways studied this request and advised that a small amendment could be made allowing the boundary to move westwards by 22 m, placing the lookout building outside the CTR, without compromising containment of IFR aircraft. Refer to Figure 2 below.



*Figure 2 – amended eastern CTR boundary*

One of the changes advised by Airways on 13 April, as mentioned above, is the requirement for a small adjustment of 80-100 m to the south-western boundary of the CTR to fully contain instrument procedures. Consequently, the requested VFR transit lane has been amended to align with this change. Eves Valley heliport is now on the boundary

of the CTR, but remains within the amended VFR transit lane. Refer to next section and Figure 3 below for more details.

The Nelson CTR will be amended as per Airways' petition and amended coordinates.

a) VFR transit lane

There was only one submission received which supported option 4 (refer Airways' petition dated 12 February 2018, page 4) with an upper limit of 1400 ft with the inner boundary using the prominent geographical features of Eves Valley Road, short sealed road, metalled road, Waimea West Road, Ellis St, River Terrace Road and Lee Valley Road.

**CAA comment:** *VFR transit lane NZT657 Tasman will be disestablished as most of it to the north and west portions are outside the boundaries of the proposed Nelson CTR.*

*As part of Airways' consultation with users undertaken prior to the airspace changes application being made to CAA, remain in the southern portion to continue the facilitation of VFR transits to and from Malibu Park airfield and some other fields regularly used by light aircraft.*

*As highlighted on page 4 of Airways' updated petition, the existing upper limit of 1500 ft infringes on existing approaches and must be revised.*

*At the user meeting, the general consensus was to favour option 4.*

*A VFR transit lane must be clear of airspace that encompasses IFR arrival and departure procedures (71.57(b)). CAA requires a 500 ft vertical buffer to be considered clear of approach and departure procedures. Additionally, 1 NM lateral buffer is used for visual fix error unless the boundary is a very prominent feature.*

*The western boundary of the new VFR transit lane as detailed in option 4 had to be re-evaluated with the change to the western boundary of the CTR as discussed above and the effect to Eves Valley heliport operations.*

*At the point on the CTR boundary where the proposed new VFR transit lane intersects, the requested amended boundary of the VFR transit lane there is a small kink to enable the heliport to remain in the VFR transit lane, and follow a significant geographical feature – in this instance roads. The requested area is shown as a red line in Figure 3 below. The yellow line is 6.3 NM from the threshold, the final approach point where an aircraft flying the Nelson RNAV (GNSS) RWY 02 approach will be descending through 1970 ft.*

*Normally, there would be a 1 NM buffer behind this point where VFR aircraft would have to be 1400 ft or below. However, by using the roads as a significant geographical feature, there is no requirement for this 1 NM buffer for visual fix error.*

*A very significant geographical feature is close to Eves Valley heliport, across the road approximately 200 m south – the Carter Holt Harvey sawmill – which is also a visual reporting point 'SAWMILL'.*



When viewed on the visual navigation chart, this kink would not be seen by the heliport would not be visible. A straight line from the boundary intersection point of the CTR and VFR transit lane to SAWMILL VRP would still place the boundary more than 500 ft below the approach descent profile. This amended boundary is shown by the light blue line and shaded area in Figure 3.



Figure 3 – Eves Valley heliport

New VFR transit lane, Brightwater, surface to 1400 ft, will be designated as requested with the adjustment to include SAWMILL VRP as depicted by the light blue line and shaded area in Figure 3.

## 2. Nelson control areas

The proposed airspace would mean extensive changes to all of the CTAs within the Nelson TMA. Refer to Appendix A for a full diagram of the amended changes.

### a) CTA north and east of Nelson

The major change in this area is the extension of CTA, lower level 3500 ft, from 25 to 35 NM NS. This is to provide containment of the new missed approach hold and ELMAX hold, and for the descent profile of new PBN arrivals.

As a late amendment, Airways has requested that the boundary between Nelson CTA/D LL3500 and Christchurch CTA/D LL5500, near Croisilles Harbour, be redrawn as a straight line instead of following the 25 Nelson DME arc, which was based on the old location of the VOR/DME. There is no affect to users with this change.

At the consultation meeting, because the requested general aviation area (GAA) at Havelock would not be able to be designated (refer below), the representative from Marlborough Hang Gliding and Paragliding Club (MHGPC) requested the boundary

between Nelson CTAs to the east, lower limits 5500 ft and 7500 ft, be moved northwards of the Richmond Ranges to accommodate hang glider and paraglider flight paths heading west over the high mountainous terrain from Mt Riley.

Airways has studied the feasibility of doing this and the boundary amendment has been made as requested.

There were no other issues raised at the meeting about this proposed airspace, and no submissions received opposing the changes.

b) CTA west of Nelson

Controlled airspace would be extended westwards for containment of new PBN departures. Again, there were no issues raised at the meeting about the proposed airspace, and no submissions received opposing the changes.

c) CTA south of Nelson

The proposed CTAs to the south of Nelson are substantially more complex due to terrain considerations in regard to the CTA lower limits. Rule 71.53 (c) requires that the lower limit of CTA is at least 500 ft below the flight paths of controlled IFR flights, as well as at the highest practical altitude and not less than 700 ft above the surface of the earth.

Based on the submissions received during the initial consultation period, Airways investigated finding a balance between providing containment and as much Class G airspace available for hang glider and paraglider operations at Inwoods Lookout. Minor boundary amendments were made to accommodate these operations.

Marlborough and Nelson Lakes Gliding Clubs requested that the CTA boundaries in the Arthur Range area (northern boundary of the south-western CTAs) be reviewed with the possibility of moving it southwards. This would enable gliders to "*...easily fly along a convergence that often sets up in front of the Arthur Range*".

Airways considered this request, but this would affect the containment of the instrument procedures to and from waypoint SKEET and route Q197, which already has a steep profile to ensure controlled airspace containment.

In response to gliding organisations' submissions, Airways considered a further CTA with a lower limit of 8500 ft south of Nelson in the vicinity of the Beeby Ranges. Refer to Figure 4. Airways stated that this request was not part of their submission, and that the diagram was to indicate what may be possible. However, it was not assured that appropriate containment would be provided to instrument procedures.

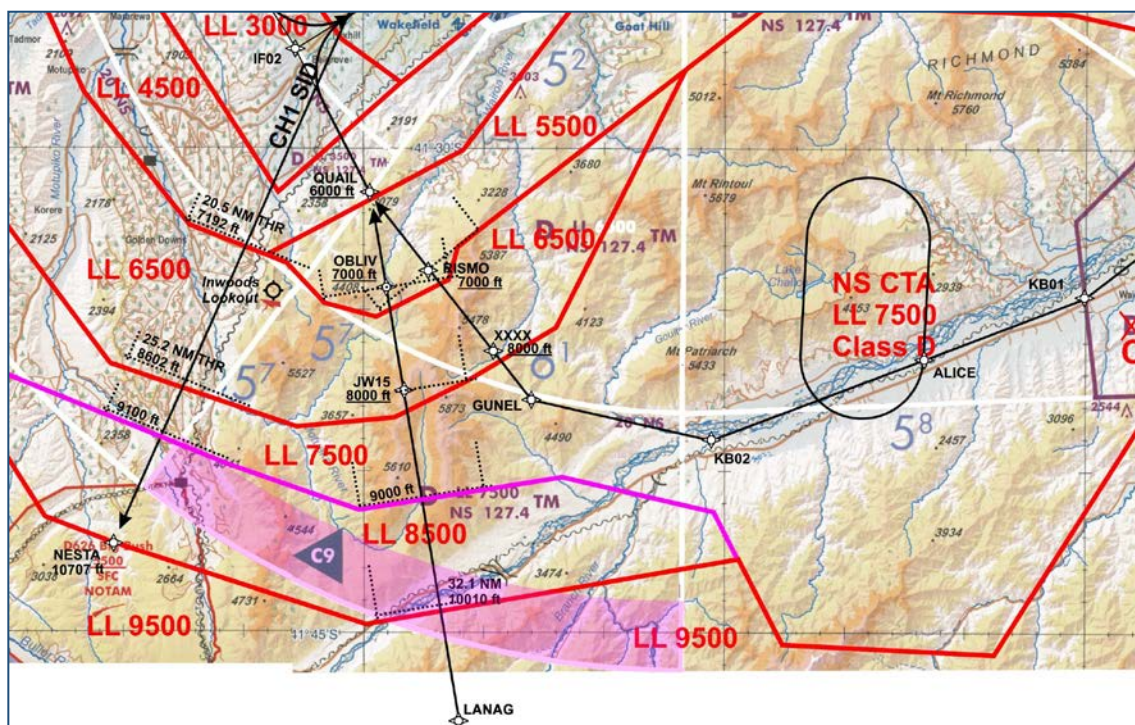


Figure 4 – requested additional control area

**CAA comment:** CAA has considered this proposal, and based on the information provided as well as discussions at the consultation meeting, has the following additional concerns about the airspace:

- Further complexity to the airspace south of Nelson
- The initial assessment indicates minimal buffers to descent profiles at higher altitude
- The outer boundary of the CTA with 7500 ft lower limit is at 26 NM Nelson. This is on the edge of the climb/descent gradient design parameter of 300 ft/NM.

Based on these concerns, CAA does not support the requested additional CTA at this time. Following the implementation of the airspace changes, a review will be undertaken to ensure that the changes remain fit-for-purpose. This request will form part of this review, along with the review of GAAs in the vicinity of Lake Station and Hanmer aerodromes (see below).

New CTAs will be designated as requested in Airways' v9 12 February 2018 document, with the late amendment to the northeast boundary in the vicinity of Croisilles Harbour.

### 3. Woodbourne control area

Airways requested the classification of NZA631, 3500 ft to 9500 ft, is changed from Class D to Class C. The controlled airspace surrounding NZA631 is Class C, and this would allow for consistency of service from Wellington Approach sector.

No submissions were received in relation to the proposed classification change, therefore the change will proceed with effect from 8 November 2018.

#### 4. General aviation areas

##### a) New GAA south of Nelson

Three gliding organisation requested a new GAA between the Inland Kaikoura range and the Southern Alps, south of Lake Station and north of Hanmer Springs aerodrome; from 9500 ft to 12,500 ft AMSL to replace existing NZG871 Lake Station.

At the user consultation meeting, Airways advised that the requested GAA would affect Nelson arrivals and departures from the south. A possible alternative has been proposed which would consist of two GAAs with a corridor between.

Due to insufficient time to fully assess and develop the alternative proposal, this request has been put on hold for possible implementation in 2019.

##### b) New Havelock GAA

At the user consultation meeting, this proposal was discussed at length. Airways advised that the proposed GAA would cause issues as it is in the confluence of three ATS units' areas of responsibilities and would create major coordination problems, as well as affecting instrument flight paths.

As detailed earlier, a minor CTA boundary change has been made to assist hang gliders and paragliders to track over high terrain in the Mount Riley area.

The requested GAA will not be designated.

#### Other airspace changes

##### 1. Visual reporting points

Airways has now advised the requested changes to the existing visual reporting points (VRPs) as follows:

- Delete Marybank and Saddle Hill VRPs
- Change existing VRP name from *Richmond* to *Racecourse*;
- Change existing VRP name from *Boulder Bank* to *Boulder*;
- Add new VRP *Bramford* (refer Figure 5), S 41 16 26.3, E173 17 44.4 (centre of park to the east of Nelson);
- Add new VRP *Maitai Dam* (refer Figure 5) at S 41 17 38.6, E 173 22 31.3 (small lake east of Nelson);
- Add new VRP *Golden Mill* (refer Figure 5) at S 41 30 23.2, E 172 51 22.1 (building symbol shown on current VNC at approximately 20 NM SW of Nelson)

In addition to the VRP changes, Airways has also requested that a town name label is added to Richmond on the VNCs, similar to Stoke and Nelson.



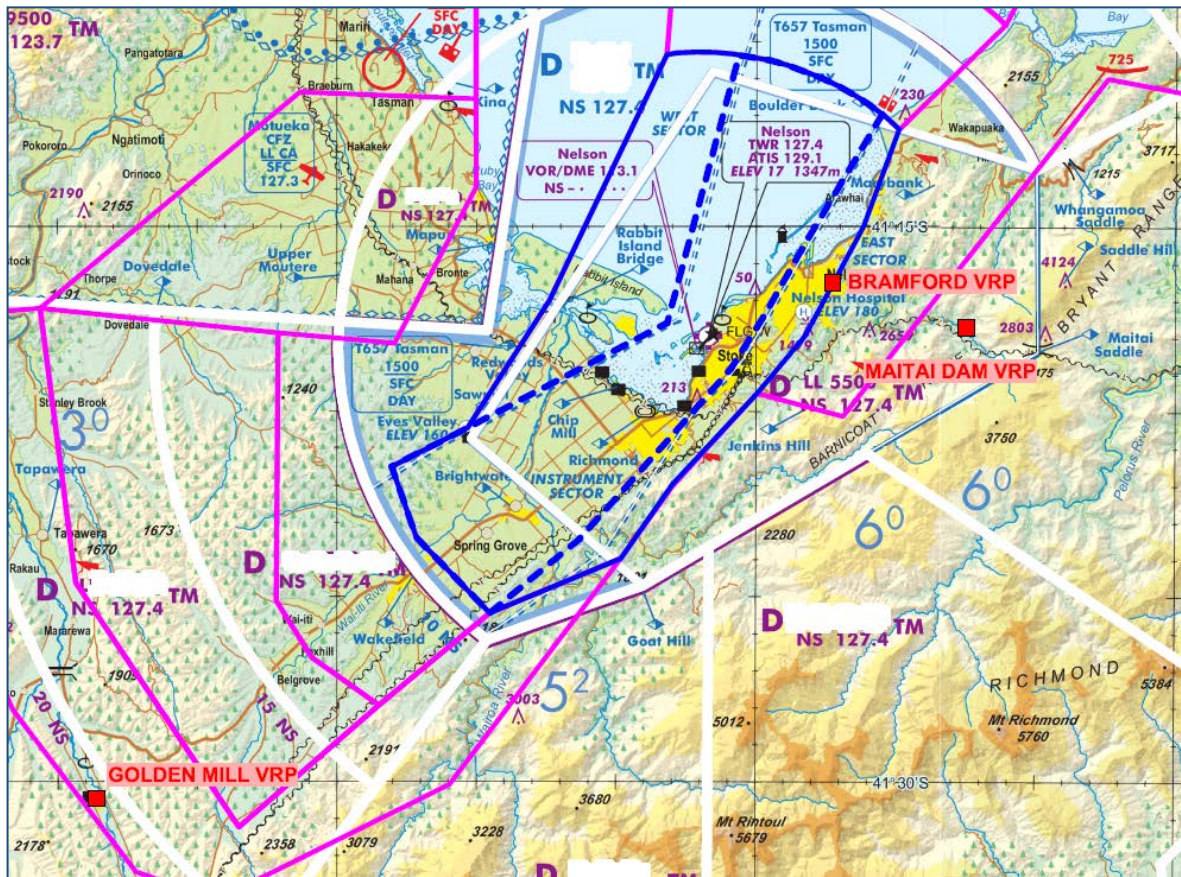


Figure 5 – new VRPs

## 2. Mandatory broadcast zones

The eastern boundary of mandatory broadcast zone (MBZ) NZB682 Motueka is co-incident with the boundary of existing Nelson CTAs NZA652 and NZA653.

The amendments to the controlled airspace boundaries will result in the common boundaries being no longer adjacent. A minor amendment is required to this boundary – refer to the diagram in Appendix B, with the new MBZ boundary outlined in blue.

The boundaries of the Motueka common frequency zone (CFZ), on the same frequency, will also require amending (see below). This amendment will result in the CFZ extending eastwards from NZB682, under controlled airspace.

## 3. Common frequency zones

Only one submission was received about the proposed extension to the Motueka CFZ. The extension was opposed because the size of the extension had the potential to result in frequency clutter.

The issue was discussed at the user consultation meeting, which was attended by three representatives from Nelson Aviation College. General consensus was that the south-western portion was not necessary, but the northern extension would be desirable.

Additionally, a consequential from the CTR redesign means that the eastern boundary needs to be extended to align with the new CTR boundaries.

There was no feedback about the suggested change of RTF call sign from “Motueka traffic” to “Tasman traffic” provide better situational awareness between traffic operating in the Motueka MBZ and the wider CFZ.

**CAA comment:** *The appropriate use of a CFZ is important. CFZs differ from MBZs in that there is no mandatory requirement to make radio calls at specified intervals.*

*Ongoing issues with incorrect radio use such as making too many radio and/or overly long broadcasts continues to be a nation-wide problem which CAA is still working on to address.*

The Motueka CFZ will be amended to the north and aligned with the Nelson CTR boundary changes. The current southern boundary would be moved slightly southwards to align with the eastern boundary of the CTR. The name will be changed to Tasman. Refer to Appendix B for a diagram of Tasman CFZ.

#### 4. Chart symbols

Hang gliding activity symbols will be added to VNCs to advise pilots of hang gliding and paragliding activity at the following launch sites:

Location	VNC
Canvastown (west of Havelock)	C7
Footes Hill (south of Havelock)	C7
Blowhard (north-eastern end of Richmond Range)	C9

### Consultation

Prior to designating airspace, Civil Aviation Rule 71.9 requires the Director to consult with affected persons, organisations and representative groups within the aviation industry before making a designation or classification of airspace.

The Director invites final feedback in regard to the final proposed airspace changes.

This document will be sent directly to the organisations listed below. It would be appreciated if you would kindly forward the document to your members for comment and consideration.

#### Aerodrome operators (charted aerodromes only)

- Hanmer Springs aerodrome (Ben-Nevis Partnership)
- Kaikoura aerodrome (Kaikoura District Council)
- Karamea (Karamea Airport Inc)

- Lake Station/Nelson Lakes aerodrome (Nelson Gliding Club)
- Marlborough Sounds Water aerodrome (Marlborough District Council)
- Motueka aerodrome (Tasman District Council)
- Murchison aerodrome (E Bradley)
- Murchison Hospital heliport (Nelson-Marlborough District Health Board)
- Nelson aerodrome (Nelson Airport Limited)
- Nelson Hospital heliport (Nelson-Marlborough District Health Board)
- Omaka aerodrome (Marlborough Aero Club)
- Picton aerodrome (Sounds Air Travel and Tourism Ltd)
- Takaka aerodrome (Takaka Aerodrome Management Committee)
- Wairau Hospital heliport (Nelson-Marlborough District Health Board)
- Woodbourne (Marlborough Airport Ltd)

### **Operators, Organisations and User Groups**

The following major operators, organisations and users have been identified:

- Air 2 There
- Air New Zealand Group – includes Mount Cook and Air Nelson
- Aircraft Owners and Pilots Association
- Airways Corporation of New Zealand
- Aviation New Zealand
- Balloon Association of New Zealand
- Canterbury Aero Club
- Flying NZ
- Garden City Helicopters
- Gliding New Zealand
- Golden Bay Air
- Helicopters New Zealand Ltd
- Kaikoura Aero Club
- Kaikoura Whale Watch
- Jetstar Regional
- Marlborough Aero Club
- Marlborough airspace user group
- Massey School of Aviation
- Model Flying New Zealand
- Motueka Aero Club
- Nelson Aero Club
- Nelson airspace user group

- Nelson Aviation College
- Nelson Lakes Gliding Club
- New Zealand Agricultural Aviation Association
- New Zealand Airline Pilots Association
- New Zealand Aviation Federation
- New Zealand Hang Gliding and Paragliding Association
- New Zealand Helicopter Association
- New Zealand Parachute Federation
- New Zealand Parachute Industry Association
- New Zealand Parachute Organisation
- Pacific Flight Training
- Recreational Aircraft Association of New Zealand
- Royal New Zealand Air Force
- Skydive Able Tasman
- Soundsair
- Sport Aircraft Association New Zealand
- Sport Aviation Corp
- Tasman Aviation
- UAVNZ

This document is also available on the CAA website at the following link:

<http://www.caa.govt.nz/airspace/airspace-review/>

Notifications will be sent to CAA email notification subscribers to Airspace Notifications – Briefing Areas 3, 6, 7 and 8.

If there are any further questions regarding the review process, please contact Paula Moore – contact details below.

## **Final submissions**

This document forms part of the consultation process. Submissions are sought from any interested person, organisation or representative group.

Submissions will be accepted either electronically or via mail.

Please address submissions to:

Group Executive Officer  
Aviation Infrastructure and Personnel  
Civil Aviation Authority of New Zealand  
PO Box 3555  
Wellington 6140



Fax: 04 569 2024

Email: [dianne.parker@caa.govt.nz](mailto:dianne.parker@caa.govt.nz)

**Reference – 2018 Nelson and Marlborough Airspace Review – final airspace changes**

Closing date for final submissions is **Friday 4 May 2018**.

### **Further information**

For further information contact:

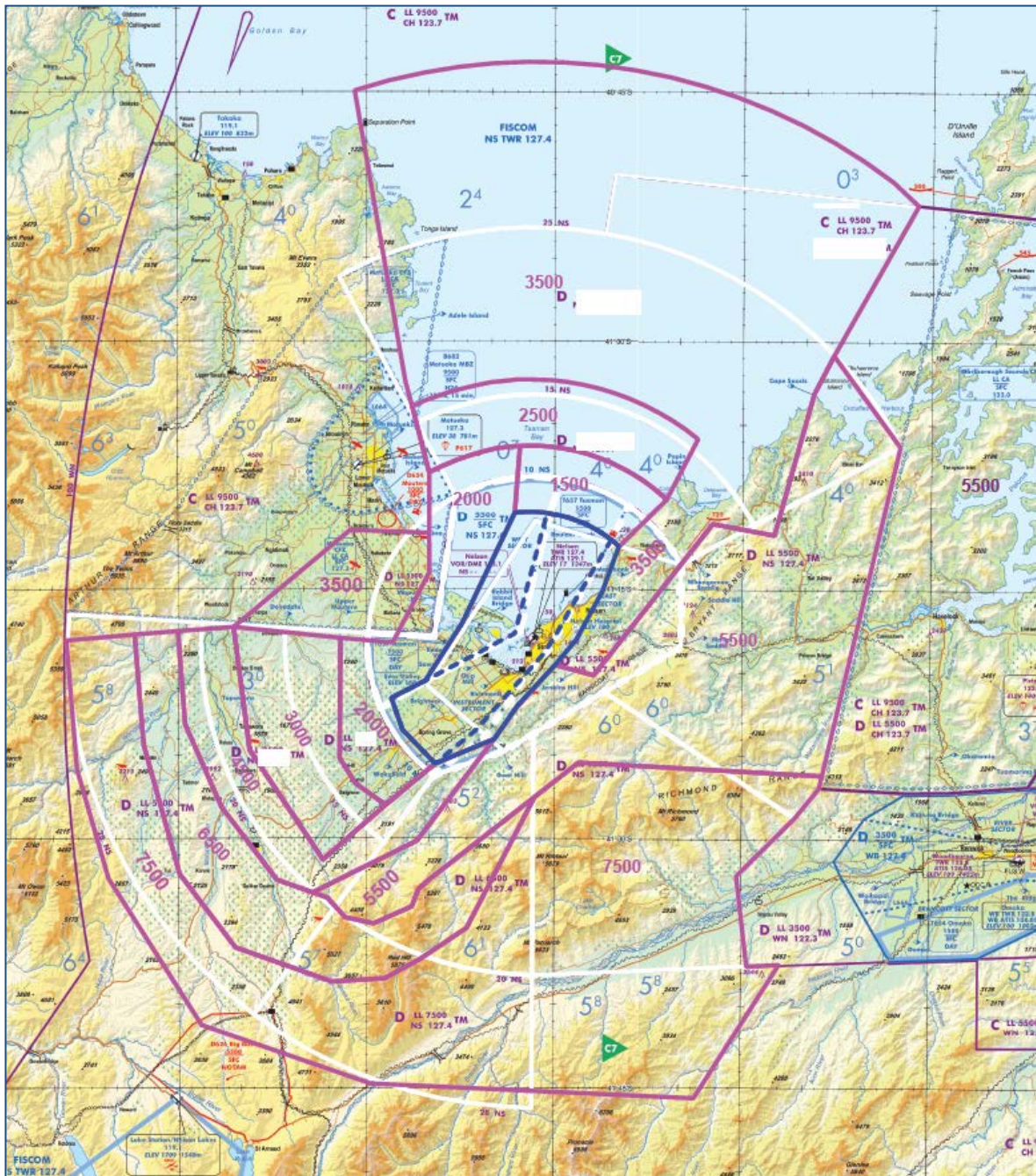
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17/ASD/55

## Appendix A – final controlled airspace changes





### Appendix B – amended Motueka MBZ and new Tasman CFZ

