

Airways New Zealand Petition
to
The Director of Civil Aviation
to
1. amend the Christchurch CTR/C and CTA/C
and
2. delete and add VRPs
and
3. amend Transit Lane NZT858 Eyrewell

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As detailed and supported by this document, Airways submit a petition to;

1. amend the Christchurch control zone (CH CTR/C NZA855) and sectors; and
2. amend Christchurch control areas (CH CTA/C) NZA841 (LL 1500 ft), NZA844 (LL 2500 ft) and NZA845 (LL 3500 ft); and
3. amend the boundary of Transit Lane NZT858 Eyrewell; and
4. delete four visual reporting points (VRP) and add six new VRP; and
5. delete City Sector.

Accompanying documents:

1. Completed CAA Form 24071/01
2. Letter from GroupEAD regarding NZT858new and RNAV (GNSS) RWY 11 approach

Requested amended CH CTR/C

The requested amended CH CTR/C (NZA855) is depicted on the diagram below. The diagram also depicts requested changes to the CH CTAs, NZT858, Instrument Sector and VRPs. The existing CTR is also depicted for comparison.

Co-ordinates for the amended CTR and other airspace boundary changes are given from page 17.

The upper limit remains at 1500 ft AMSL.

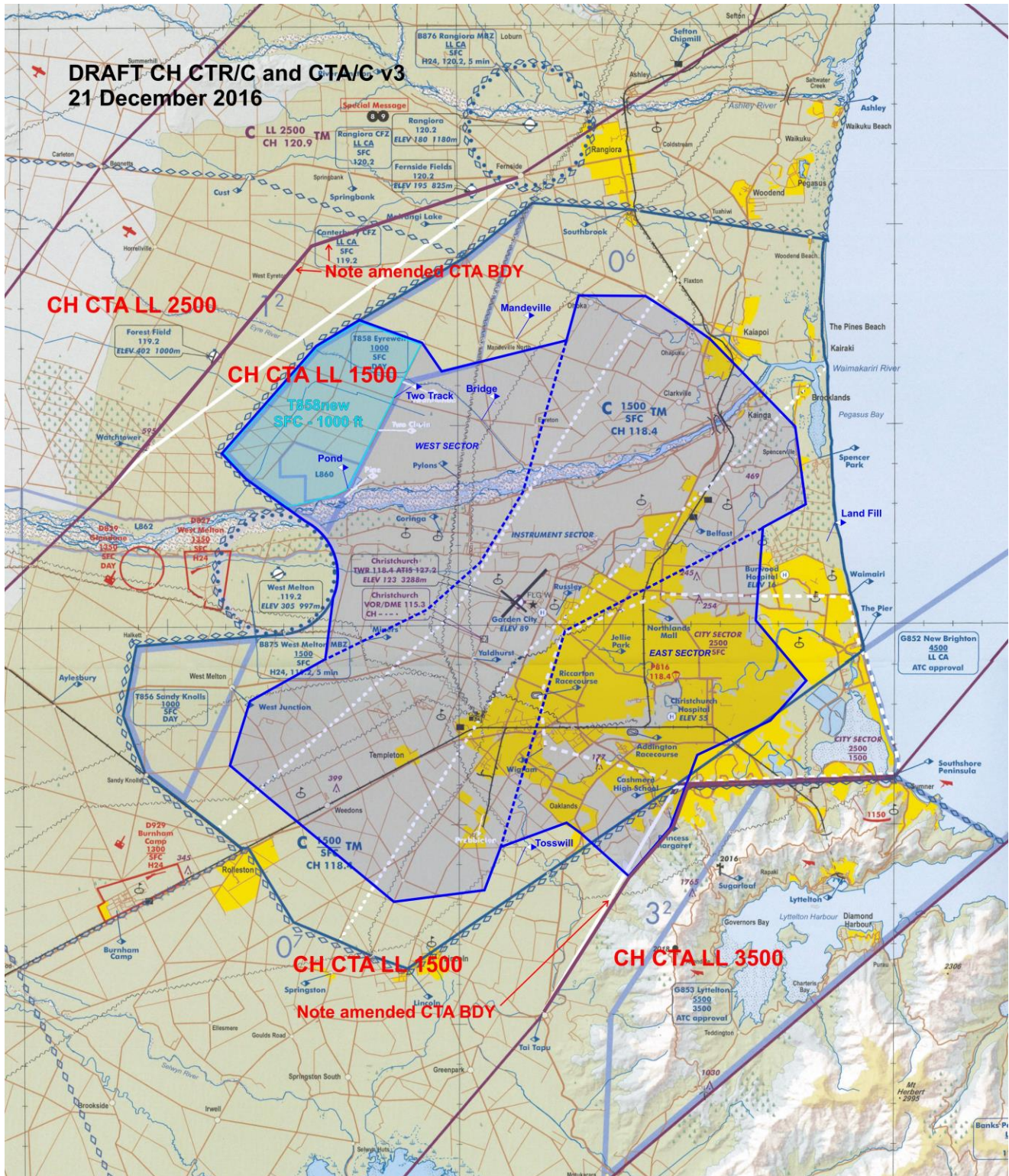


Diagram 1 depicting amended CTR shaded blue, amended CTAs, amended NZT858 shaded light blue, amended Instrument Sector blue dashed line and new VRP.

Airspace containment criteria applied

ILS approach	VOR splay
VOR approach inbound legs	VOR splay
RNAV approach inbound legs	VOR splay
RNAV approach 'cross-bar'	2 NM buffer
RNAV RNP 0.3 curved approaches	2 x RNP plus 1 NM buffer between nominal track and CTR boundary (i.e. 1.6 NM) reducing to VOR splay once on final
RNAV RNP approach curved missed approach tracks (RNP 1 spec)	VOR splay until commencement of turn, thereafter 2 NM buffer between nominal track and CTR boundary
Straight missed approaches	VOR splay based on missed approach track
Straight departures	VOR splay based on departure track

Except where specified otherwise, airspace based on aircraft flying a continuous 300 ft per NM climb and descent profile to/from RWY threshold.

Procedure containment

The draft CTR is designed to provide controlled airspace containment for;

- the existing instrument approaches and departures except those mentioned below; and
- planned new RNAV instrument procedures; and
- Cat A and B circling to all RWYs
- Cat D (and therefore also Cat C) circling to RWY 11 except in the West Melton Class G area – see page 10 Containment of circling approaches
- Cat C and D circling to RWY 29 – see page 10 Containment of circling approaches

Existing instrument procedures not contained by the draft CTR:

RWY 11 SID DIVSU1B departure. For the DIVSU1B (left turn to the north), containment would require the CTR being moved out about a further 0.6 NM. Possibly a very small expansion of the CTA LL 3500 ft may also be needed depending on turn radius applied.

RWY 11 SID ALBAD1B departure. For the ALBAD1B (right turn to the south), containment would require the CTR being moved out about a further 1 NM. This would place the CTR into the foot hills which would not allow for the overlying CTA LL 1500 ft to be the required 700 ft or more above terrain.

Evaluated Climb Sector. Containment not assured; depends on outbound track, altitude when the aircraft turns off RWY centreline and climb gradient achieved.

Radar SIDs. Airways intention is that the Radar SIDs for RWYs 02, 20 and 29 are to be withdrawn effective by November 2017. Therefore, no consideration for containment of radar SIDs has been included in the draft CTR.

Reasons for amended CTR and CTAs

1. Airways desires to reduce the size of the CTR/C in order to release currently unneeded controlled airspace to Class G. This desire is in-line with CA Rule 71. As can be seen in Diagram 1, significant portions of the existing CTR are not currently needed for the amended CTR and would be released to Class G.

The reduced size of the CTR results in less area in which ATC are required to provide ATC service therefore allowing ATC, particularly Aerodrome Control, to be less distracted by low level operations outside the vicinity of the aerodrome.

The reduced size of the CTR also provides for more low level airspace being Class G which allows for Part 101 operations without the need for ATC authorisation.

2. There is a need to provide correct airspace containment for the RNAV (RNP) instrument approaches to Christchurch airport (NZCH) RWY 29. This requires the addition to the CTR of airspace to the south-east of NZCH. Further details of those CTR amendments are given below – Diagram 2. Additionally, the CTA LL 1500 ft needs to be expanded to the north west to contain the missed approach tracks. Further details are given below – Diagram 3
3. Due to the amended CH CTR being expanded to the south east, the overlying CH CTA LL 1500 ft (NZA841) also needs to be expanded to match the CTR boundary. The amended NZA841 boundary requires amendment of the adjoining CTA LL 3500 ft (NZA845). Further details of those CTA amendments are given below – Diagram 2.
4. Airways understands that airlines desire that the current, but temporary, RNAV (GNSS) RWY 11 approach be permanently available for use day and night (H24). Currently, this approach is only available during night and is valid only until 25 May 2017.

It is Airways understanding that the issues preventing that approach being available H24 are that;

1. NZT858 infringes the airspace containment area – hence the approach only available at night when T858 is not active; and
2. there are containment issues for the legs of the approach LIDRA to GODUM and DODSO to GODUM

Slightly amending the eastern boundary of NZT858 resulting in no infringement of the approach containment will address the first issue. And, expanding the CTA LL 1500 ft (NZA841) up to 1.75 NM westward would address the second containment issue. Refer pages 7 and 8. With those changes in place, the RNAV (GNSS) RWY 11 approach should be able to be made available H24.

Having that approach available at all times enhances safety as there would be a straight-in instrument approach to RWY 11 for airliners to fly rather than having to fly an approach to RWY 20 and then circling to RWY 11 as they currently do.

5. Four existing VRPs would be deleted as their value for air traffic management with the amended CTR is much diminished. These are; Two Chain, Swannanoa, Prebbleton and Pine.

Six new VRPs are requested. These VRP locations will be useful for air traffic management. The new VRP are indicated on Diagram 1 and further detailed on page 12.

South eastern expansion of CTR and CTA

To correctly contain the RNAV (RNP) W, X and Y RWY 29 approaches, the CTR needs to be expanded to the south east as shown on Diagram 2 below.

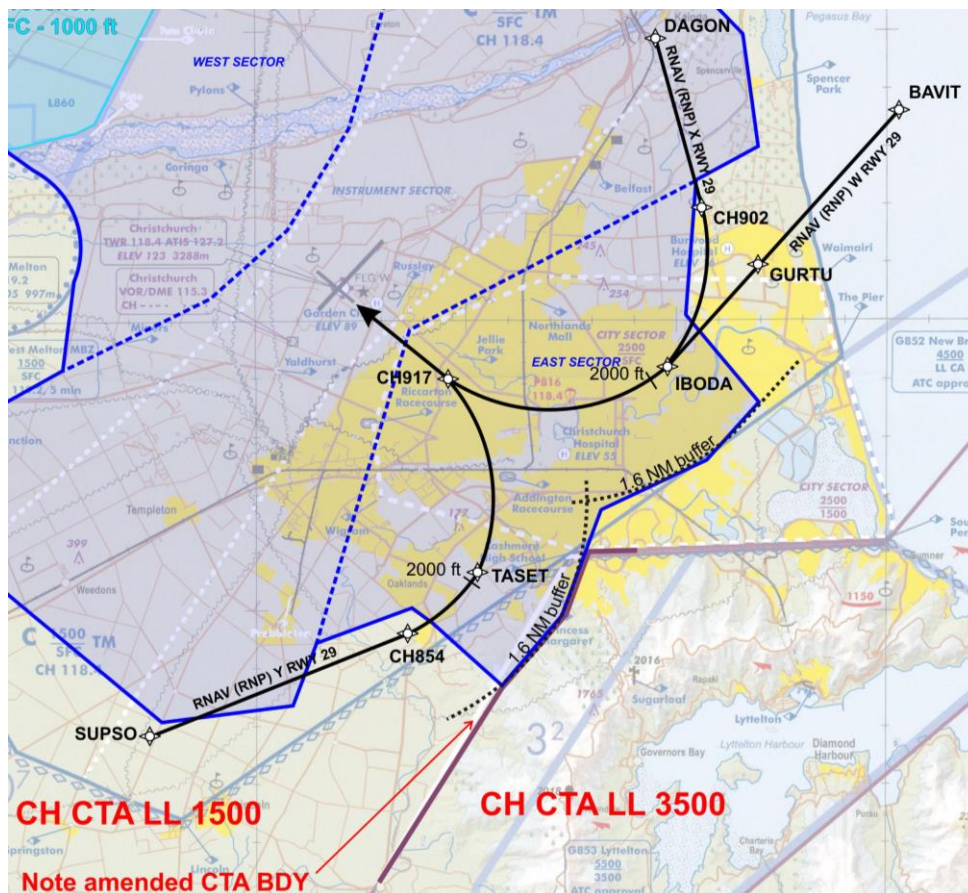


Diagram 2 above depicts the RNP W and X approaches from the north and the RNP Y approach from the south to RWY 29. The points on the approach where the aircraft descends through 2000 ft are marked on the approach path. The black dashed line is the 1.6 NM buffer from the approach tracks – the 1.6 NM buffer being $2 \times \text{RNP value} + 1 \text{ NM}$. The draft CTR is expanded so that the 1.6 NM buffer is contained within the draft CTR when the approach is below 2000 ft. The 'V' indentation in the south eastern CTR boundary is there to minimise the increase in the CTR.

The overlying CTA LL 1500 ft is amended to match the draft CTR boundary and the CTA LL 3500 ft boundary needs to be moved to match the amended 1500 ft CTA boundary.

RNAV (RNP) W, X and Y RWY 29 missed approach containment

The missed approach is contained by the draft CTR and CTA using the criteria of 300 ft/NM climb gradient commencing from RWY 29 threshold at DA 430 ft. This is based on AIPNZ ENR 1.5 – 2 para 1.3.9 text. Lateral criteria being VOR splay based on RWY 29 threshold and 2 NM buffer for the curved portion of the missed approach.

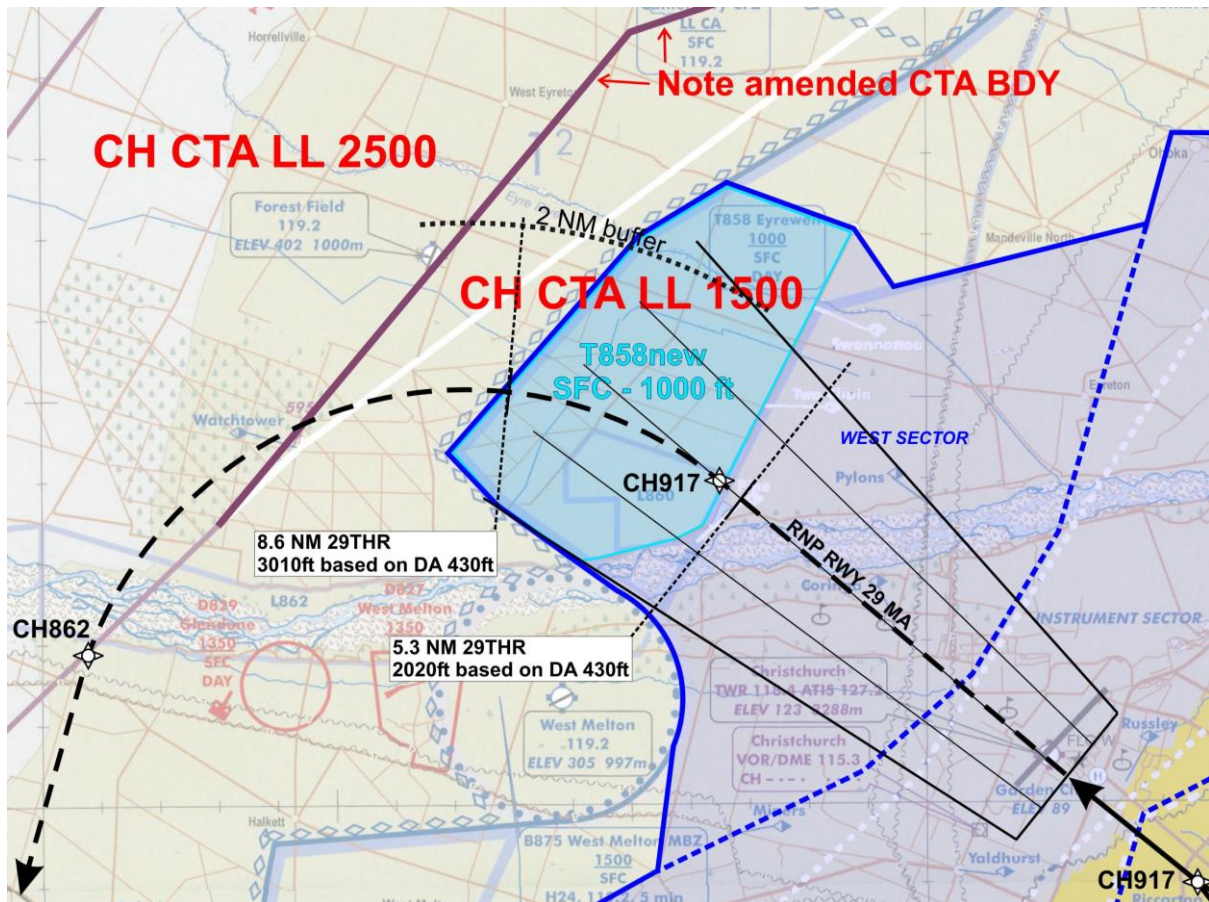


Diagram 3 above depicts the RNP missed approach for the RWY 29 RNP approaches along with the VOR splay from RWY 29 THR and the 2 NM buffer. The points at which the aircraft would climb through 2020 ft and 3010 ft are marked. That is based on 300 ft per NM gradient commenced from RWY 29 THR at DA 430 ft.

The CTA LL 1500 ft is expanded to the northwest to contain the missed approaches (nominal track and 2 NM buffer) to the point where they climb through 3000 ft.

Note: If the criteria applied was the more common/default 300 ft/NM commencing from upwind threshold at RWY elevation then the missed approach would not be fully contained by the CTR for a short distance as it turned left around West Melton and the 1500 ft CTA would need further expansion to the northwest.

Transit Lane NZT858 reduction due RNAV RWY 11 approach

The existing NZT858 Eyrewell Transit Lane infringes slightly into the airspace containment area for the current, but temporary, RNAV (GNSS) RWY 11 approach. This is a reason why this approach is currently available at night only when the transit lane is not extant.

By moving the transit lane boundary to follow Two Chain Road and the northern bank of the Waimakariri River, both of which are prominent geographical features, the RNAV (GNSS) RWY 11 approach and T858 would no longer conflict. This is supported by the letter from GroupEAD accompanying this petition.

Airways request that T858 is amended as detailed above and on page 20. With the RNAV (GNSS) RWY 11 approach and T858new not conflicting, the night-only limitation on the approach may no longer need to apply.



Diagram 4 above depicts NZT858new:

Dark blue lines – NZT858new boundary with Two Chain Road being the very slightly amended eastern boundary and the northern bank of the Waimakariri River being the new southern boundary.

Light blue lines – existing NZT858 boundary.

If the draft CTR is designated by the Director, the portions of the existing NZT858 lying outside the draft CTR will no longer be needed.

Regarding possible ACAS events, CH ATC make the following observation;

Just on a quick break from the TWR boards. The effect on ACAS will be no more than on any other approach that crosses an uncontrolled airspace boundary. At present IFR aircraft cross over the transit lane on a similar profile, by day, with no ACAS conflict reports.

I see no reason why any significant negative impact of ACAS should be encountered compared to the current environment.

NOTE: If the existing RNAV (GNSS) RWY 11 approach is relocated 300 m west to accommodate the planned 300 m westward extension of CH RWY 11/29, then the relocated approach and NZT858new would conflict again. To de-conflict that, the eastern boundary of NZT858new would need to move approximately 1.2 NM westward. Moving that boundary only the same 300 m would result in the boundary not following a prominent geographical feature (Two Chain Road) and therefore an additional 1 NM buffer is required.

RWY 11 approach and north western expansion of CTA LL 1500 ft

Additional to the issue with NZT858, to correctly contain the current, but temporary, RNAV (GNSS) RWY 11 approach, the CTA LL 1500 ft needs to be moved north west by up to 1.75 NM as indicated in the diagram below. Moving that 1500 ft CTA boundary would require the adjoining CTA LL 2500 ft boundary to be moved out to match.

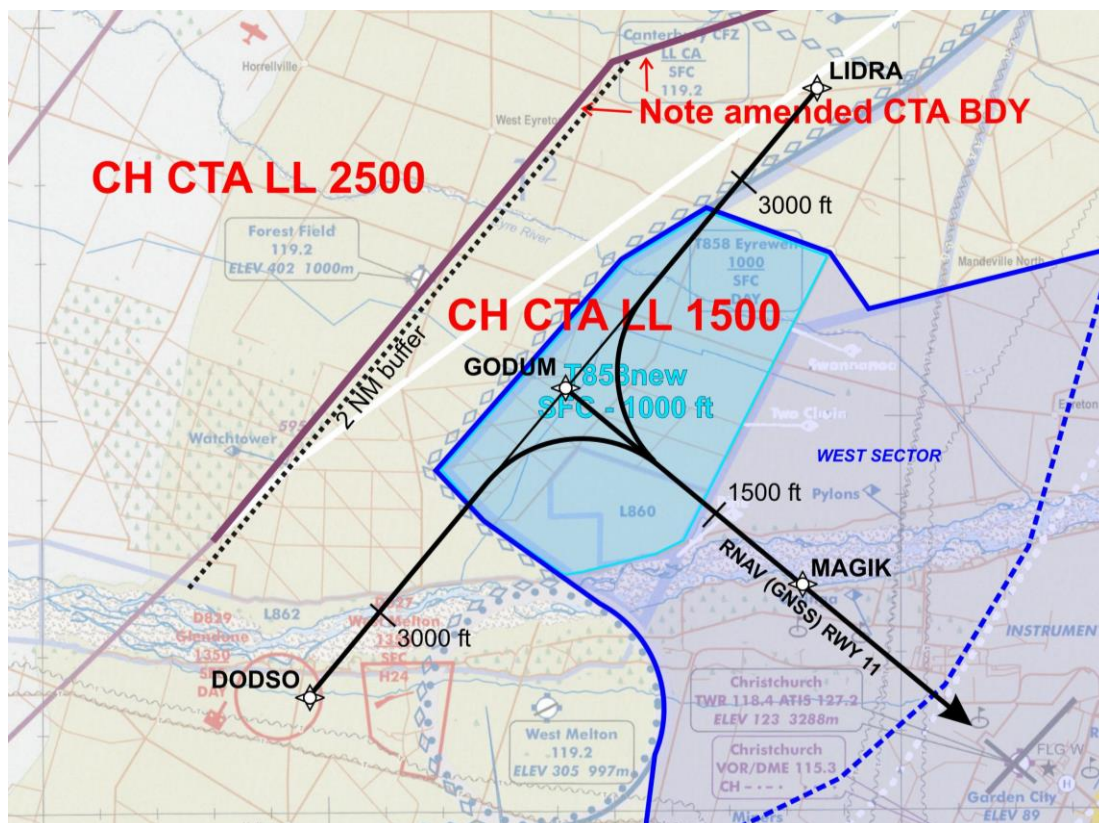


Diagram 5 above depicts the current RNAV (GNSS) RWY 11 approach. Check marks are added to indicate where the aircraft would descend through 3,000 ft. From those points onwards, the approach needs to be contained by the CTA LL 1500 ft – hence the need to extend that CTA northwest by up to 1.75 NM.

The 2 NM airspace containment buffer is the black dashed line in the diagram.

With the CTA changes and the NZT858 changes in place, Airways believe that the existing RNAV (GNSS) RWY 11 approach could be permanently published as available H24.

Having that approach available at all times enhances safety as there would be a straight-in instrument approach to RWY 11 for airliners to fly rather than having to fly an approach to RWY 20 and then circling to RWY 11 as they currently do.

NOTE: The requested location of the new 1500 ft CTA boundary should allow for the 300 m relocation to the west of the existing RNAV (GNSS) RWY 11 approach to accommodate the planned 300 m westward extension of CH RWY 11/29.

Low Flying Zones NZL860 and NZL862

NZL860

Diagram 6 below depicts the draft amended NZT858new – blue line. The orange line is the boundary of low flying zone NZL860.

Note that the eastern boundary of L860 is very slightly outside T858new and the southern boundary is a little more outside T858new.

There is no 'rule' requirement for L860 to be contained within the transit lane. But, pilots wishing to fly in those portions of L860 that are not in T858new would need to obtain an ATC clearance to operate in those Class C airspace portions.

Airways would have no issues with T858new being extended slightly to match the eastern and/or southern boundaries of L860 should CAA determine that doing that, without impacting on the RNAV RWY 11 approach, would be beneficial.

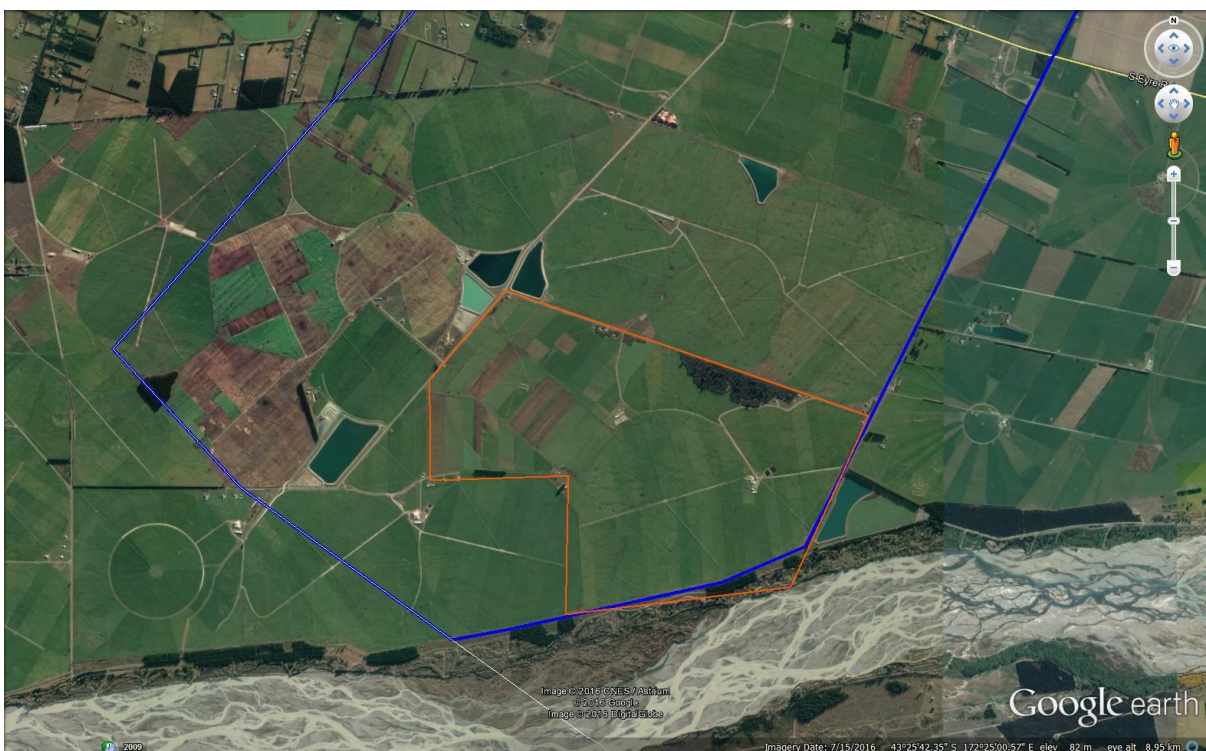


Diagram 6 T858new and low flying area L860

NZL862

Diagram 7 below depicts the draft amended NZT858new – blue line. The orange line is the boundary of low flying zone NZL862 and the thin white line is the CTR boundary.

Note that the north eastern corner of L862 (triangular shaped) lies inside the CTR boundary but outside the draft NZT858new. Therefore, that small portion of L862 lies within Class C airspace. Pilots wishing to fly in that small north eastern portion of L862 within the CTR would need to obtain an ATC clearance to operate there.

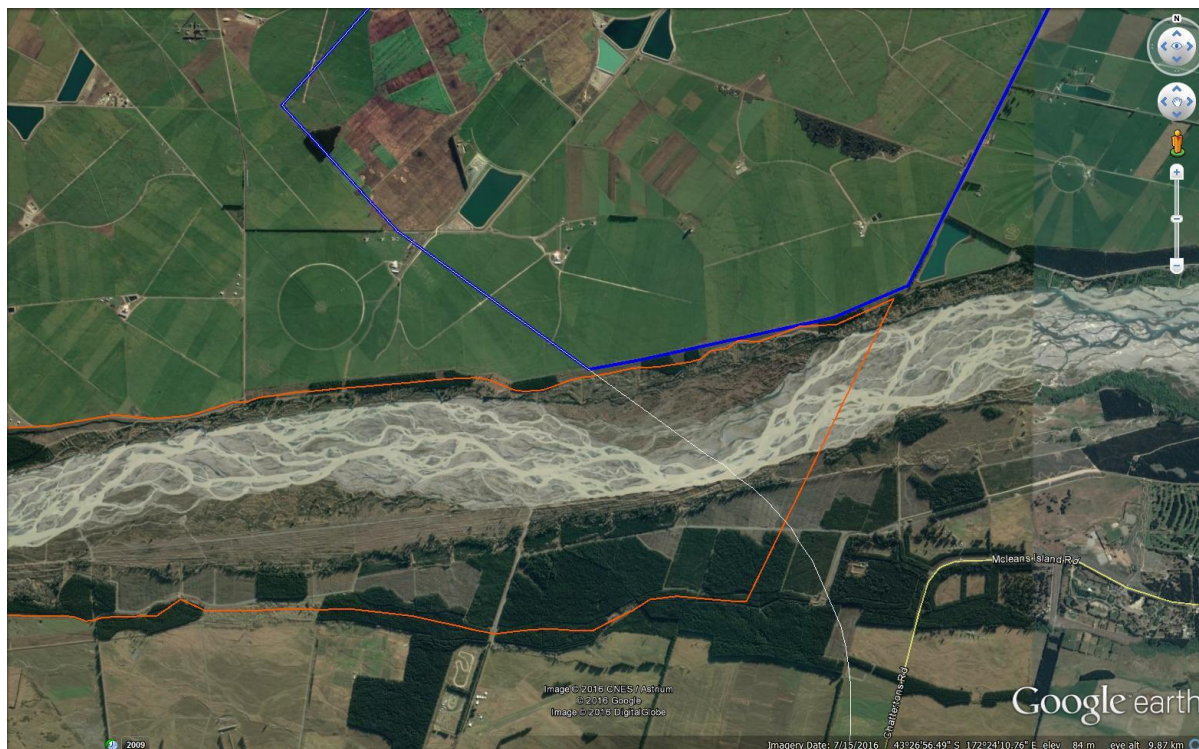


Diagram 7 T858new and low flying area L862

Containment for circling approaches

The draft CTR provides for containment of:

- Cat A and B circling to all RWYs
- Cat D (and therefore also Cat C) circling to RWY 11 except in the West Melton Class G area
- Cat C and D circling to RWY 29

Cat C and D aircraft can use RWY 29. There is no straight-in (or curved RNP) approach to RWY 29 that is available for general use therefore a circling approach is the only approach for a Cat A, B, C or D aircraft to RWY 29. Therefore, the draft CTR is designed to contain circling to RWY 29 for Cat A, B, C and D approaches.

Cat D aircraft can use RWY 11. On the expectation that the existing RNAV (GNSS) RWY 11 approach will become available H24, there will still be no straight-in Cat D approach (that approach is Cat A, B and C only) therefore, a circling approach is the only approach for Cat D aircraft to RWY 11. Therefore, the draft CTR is designed to contain circling to RWY 11 for Cat D approaches. However, a portion of the Cat D circling area lies over the Class G airspace around West Melton. It is expected that this Class G airspace would not be changed to Class C to provide circling containment. Therefore, either Cat D circling to RWY 11 through that area is withdrawn or it is accepted by CAA and operators that Cat D circling will not be fully contained in that area with appropriate annotation of that on applicable approach charts.

Note 1: In the event that it is determined that controlled airspace containment for Cat D circling to RWY 11 and/or RWY 29 is not required, the CTR boundaries 'between the fans' could be brought closer to NZCH.

Note 2: Providing a Cat D straight-in approach to RWY 11 should remove any requirement for Cat D circling containment to RWY 11 however, without a further small expansion, the current and draft CTA may not be sufficient to contain a new Cat D RNAV approach.

Draft CTR boundaries

The draft CTR boundaries are laterally as close to required minimums as possible in order to release as much airspace as possible to Class G. However, where felt appropriate, without being excessive, some of the draft CTR boundary lines and corners have been moved out by a small amount to line up with visual features such as roads and road intersections. There has also been some 'smoothing' of the boundary lines to avoid some short boundary legs and 'zig-zagging'.

Some further boundary movement outwards could be made to better align with geographical features at the expense of added CTR – e.g.

- To the north the boundary could follow North Eyre Road and then McHughes and Bradleys roads through Mandeville. See diagram 8 below.
- To the south west, the CTR corner could be moved out to West Junction VRP. See diagram 9 below.

Diagram 8. Black dashed line depicting possible CTR expansion to follow roads via Mandeville.

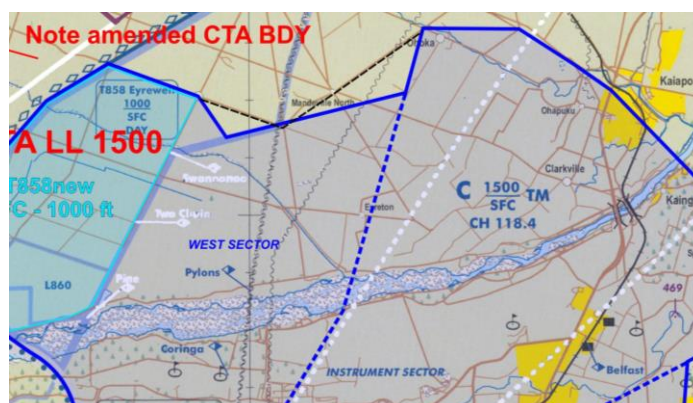
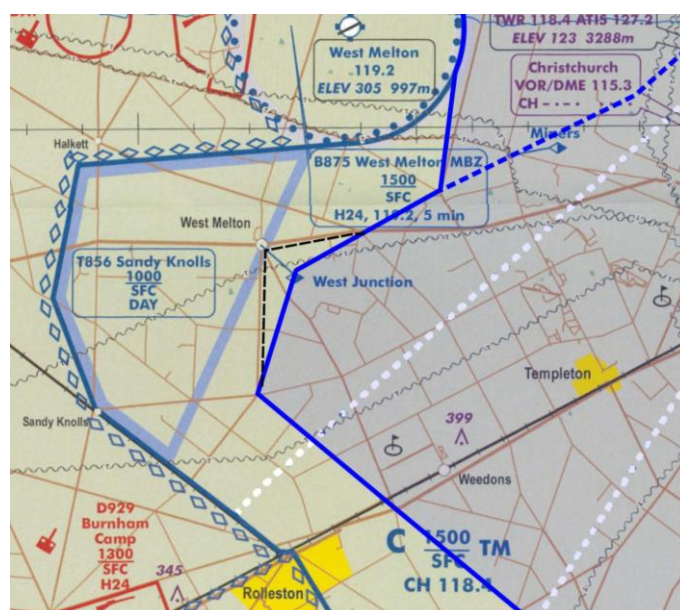


Diagram 9. Black dashed line depicting possible CTR expansion to follow roads via West Junction VRP.



CTR and CTA Sectors

Instrument Sector.

It is requested that the existing CH CTR Instrument Sector (NZA855_B) is replaced with a new, wider Instrument Sector that will encompass the existing and proposed new IFR procedures.

East and West Sectors

It is requested that the portion of the draft CTR to the east of the new Instrument Sector is designated and labelled on VNC as "EAST SECTOR".

Likewise, it is requested that the portion of the draft CTR to the west of the new Instrument Sector is designated and labelled on VNC as "WEST SECTOR".

The three sectors are depicted on diagram 11.

City Sector.

It is requested that the existing City Sector (NZA855_A and NZA841_S) within the CTR and CTA is disestablished.

Visual Reporting Points

Visual Reporting Points - to be disestablished

It is requested that the following VRPs are disestablished.

Two Chain
Swannanoa
Prebbleton
Pine

Visual Reporting Points – new to be established

It is requested that the following new VRP are designated and promulgated on VNC.

Pond:	S43° 26' 27.43" E172° 26' 16.21"	Large agricultural pond abeam the Waimakariri River near the location of existing VRP Pine (but not exactly the same location). Pond VRP is a corner of NZT858new.
Tosswill:	S43° 35' 56.68" E172° 32' 01.76"	Intersection of Tosswill Road and Ellesmere Road about 1 NM east of Prebbleton.
Land Fill:	S43° 27' 53.92" E172° 42' 40.89"	Land fill area 7.8 NM to the east of NZCH near the coast. See diagram 10 below
Bridge:	S43° 24' 46.82" E172° 30' 51.25"	4.5 NM NNW of NZCH where South Eyre Road crosses the waterway.
Mandeville:	S43° 22' 45.43" E172° 32' 04.42"	6.5 NM N of NZCH Junction of Tram Road and McHugh's Road.
Two Track:	S43° 24' 12.18" E172° 27' 50.48"	5.5 NM NW of NZCH Junction of South Eyre Road and Two Chain Road Road.

The deleted and added VRP are depicted on the VNC diagram 11 on page 14.



Diagram 10 Requested new VRP "Land Fill"

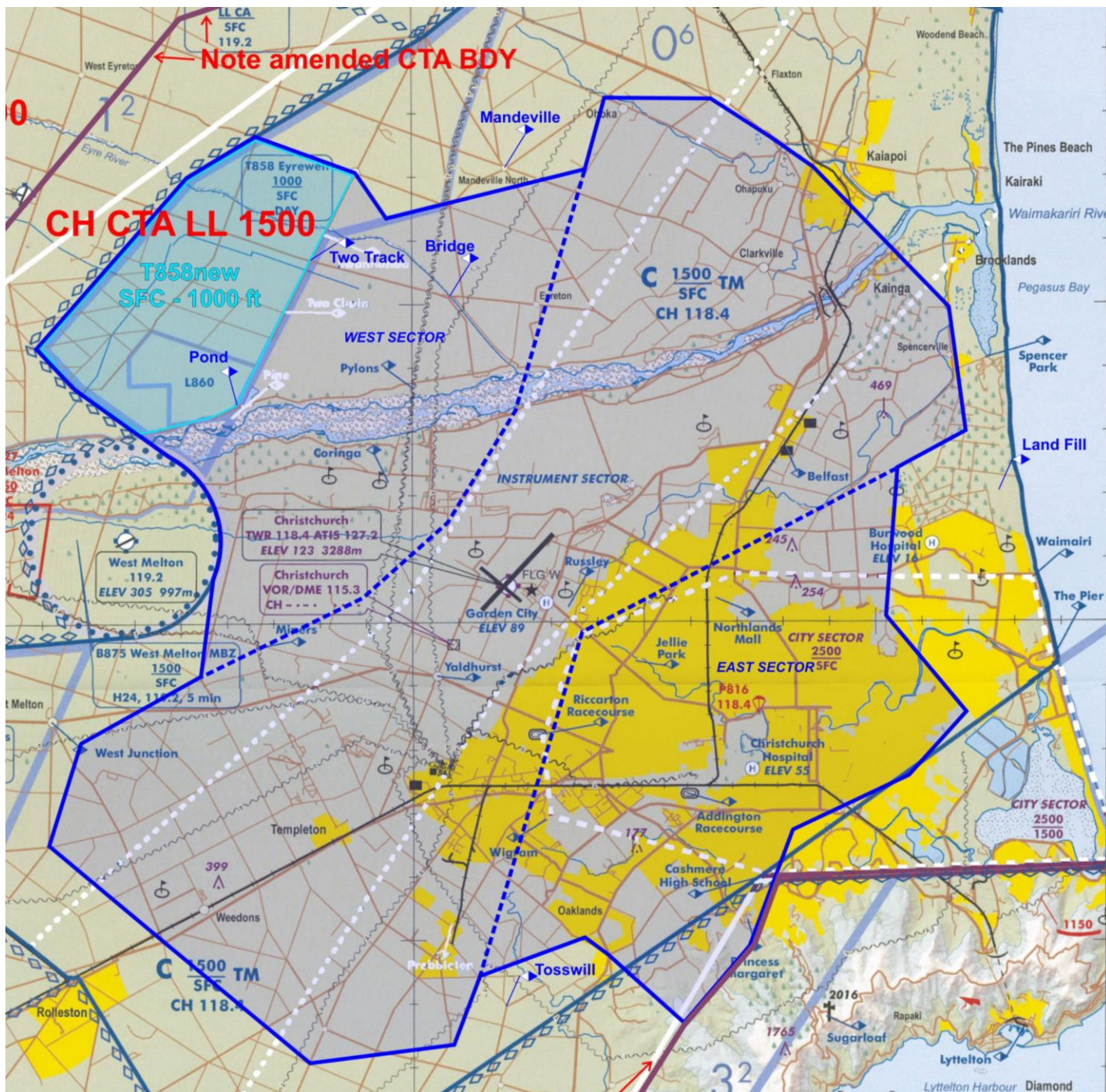


Diagram 11 Close up of requested CH CTR including:
 - New West, Instrument and East sectors
 - Deleted VRP (white text)
 - Added new VRP (blue text)

Consultation carried out by Airways

Airways presented the initial draft CH CTR proposal at the Airways National Customer Liaison Meeting (NCLM). Additionally, Airways consulted with the Canterbury Air Users Group (CAUG) which includes local operators and the Christchurch International Airport Limited.

Feedback received includes:

The CH CTR Airspace draft proposal has been consulted with NCLM on Thu 01Dec16, and with CAUG on Fri 02Dec16.

- NCLM feedback – minimal; customers are IFR focussed.
- CAUG feedback – general acceptance, and acknowledgement that we've endeavoured to accommodate the VFR traffic in particular around the Transit lanes. Brent had paved the way with pre-consultation discussions with Christchurch Helicopters, Garden City Helicopters, and the New Zealand Aviation Academy.

One operator expressed concern that "boundaries for CTZ not obvious geographically. Noted valid concern."

BN (Airways) met with [local operator]. Briefed on proposed changes and why. No major concerns regarding airspace changes. Acceptance that Transit Lane to west may diminish with reduction in LFZ. Noted that CTR shape may be more complex. Concern regarding time frame for interim VFR procedures with introduction of RNP AP approaches followed by revised procedures with new airspace. Confusing for pilots with 2 changes within 4 months. Highly non desirable.

BN (Airways) met with [helicopter operator]. Briefed on proposed changes and why. Acceptance that Transit Lane and LFZ to west may diminish (though unfortunate). No major concerns regarding airspace changes. Supportive of release of airspace.

BN (Airways) met with [fixed wing training operator]. Briefed on proposed changes and why. Supportive of release of airspace. Noted more complex CTR shape but acceptable. Acceptance that LFZ in transit lane is likely to become non suitable for fixed wing operations with reduction in size. Significant concerns regarding VNC being out of date for a 4 month period between introduction of RNP AR and airspace review (with updated VNC). Significant concerns regarding sequential VFR procedure changes 4 months apart. Supportive of missed approach options that will minimise the delays to their IFR operations and the effect of their IFR operations on other airspace users.

Further feedback following updated (but very similar) version 2

[helicopter operator] – No additional concerns. Concepts are being developed to allow use of L860 within the CTR.

[helicopter operator] - No additional concerns. Concepts are being developed to allow use of L860 within the CTR.

NOTE: There has been a late-notice change to the requested CTA LL 1500 ft to the north west of NZCH. The CTA boundary has been moved out a bit to remove the 'saw-tooth' kink previously in the draft boundary. This change has not been fully consulted with local operators. Those operators we spoke with (including the Fernside Fields and Barradale (sp ?) strip operators) appear to have no issue with this change.

Consequential airspace changes identified by Airways

In the event that CAA does amend the CH CTR, CTA and NZT858 as requested by this petition, operators and CAA may wish to review the following;

Rangiora CFZ, Canterbury CFZ and Banks Peninsula CFZ: These CFZ adjoin the current CH CTR. Following the moving of the CTR boundary, it may be that the CFZ boundaries should also be amended to adjoin the new CTR boundary.

L860: Operators may wish to request amendment of the boundaries of L860 so that it fully lies outside/immediately adjacent to amended T858.

L862: Operators may wish to request amendment of the boundaries of L862 so that it fully lies outside/immediately adjacent to amended CH CTR.

Amended CTR, CTR Sectors, CTA and T858 Definitions

NZA855new CH CTR/C (Complete CTR outer boundary)

All that airspace bounded by a straight line from;

S43° 25' 00.01" E172° 41' 34.88" to;
S43° 27' 00.93" E172° 41' 57.76" to;
S43° 27' 33.72" E172° 40' 31.29" to;
S43° 29' 53.60" E172° 40' 16.34" to;
S43° 31' 22.39" E172° 41' 58.69" to;
S43° 32' 20.21" E172° 40' 44.66" to;
S43° 33' 16.26" E172° 38' 15.14" to;
S43° 33' 53.39" E172° 37' 56.64" (new corner point for overlying CTA) to;
S43° 35' 04.91" E172° 37' 21.07" to;
S43° 36' 16.39" E172° 35' 52.71" to;
S43° 35' 07.37" E172° 34' 14.99" (intersection Halswell Junction Rd, Halswell Rd, Sparks Rd) to;
S43° 34' 55.49" E172° 33' 46.41" to;
S43° 35' 28.25" E172° 31' 24.70" (intersection Trices Rd, Tosswill Rd) to;
S43° 36' 39.78" E172° 30' 54.00" to;
S43° 36' 49.66" E172° 27' 44.64" (intersection Tancreds Rd, Shands Rd) to;
S43° 33' 24.37" E172° 22' 07.16" (intersection Newtons Rd, W Melton Rd) to;
S43° 31' 48.59" E172° 22' 48.17" to;
S43° 30' 45.54" E172° 25' 26.36" (intersection Langdales Rd, Chattertons Rd) to;
S43° 29' 12.04" E172° 25' 42.09" (point on existing CTR boundary) then;
the arc of a circle of 1.5 NM radius centred on S43° 28' 36.0" E172° 23' 48.4" West Melton ARP
from;
S43° 29' 12.04" E172° 25' 42.09" anticlockwise to;
S43° 27' 15.51" E172° 24' 43.74" (existing NZA855_C seq 11) then a straight line to;
S43° 26' 11.0" E172° 22' 42.5" (existing NZA855_C seq 12) to;
S43° 25' 33.0" E172° 21' 54.5" (existing NZA855_C seq 13) to;
S43° 22' 52.3" E172° 25' 11.2" (existing NZA855_C seq 14) to;
S43° 22' 14.94" E172° 26' 38.23" (point on existing CTR boundary) to;
S43° 22' 49.55" E172° 28' 47.28" (intersection N Eyre Rd, Two Chain Rd) to;
S43° 23' 31.56" E172° 29' 28.32" to;
S43° 22' 48.81" E172° 33' 44.02" to;
S43° 21' 39.89" E172° 34' 11.15" (intersection Mill Rd, Bradleys Rd) to;
S43° 21' 40.80" E172° 36' 27.51" (intersection Main Drain Rd, Threlkelds Rd) to;
S43° 22' 17.06" E172° 37' 45.78" to;
S43° 22' 46.61" E172° 38' 39.51" to;
S43° 25' 00.01" E172° 41' 34.88"

Vertical limits: SFC to 1500 ft

Classification: Class C

ATC Authority: Christchurch Tower 118.4

NZA855_Bmod Instrument Sector in CH CTR/C

The widened CH CTR Instrument Sector

All that airspace bounded by a straight line from;

S43° 27' 00.93" E172° 41' 57.76" to;

S43° 27' 33.72" E172° 40' 31.29" to;

S43° 30' 06.13" E172° 33' 38.01" to;

S43° 35' 28.25" E172° 31' 24.70" (intersection Trices Rd, Tosswill Rd) to;

S43° 36' 39.78" E172° 30' 54.00" to;

S43° 36' 49.66" E172° 27' 44.64" (intersection Tancreds Rd, Shands Rd) to;

S43° 33' 24.37" E172° 22' 07.16" (intersection Newtons Rd, W Melton Rd) to;

S43° 31' 48.59" E172° 22' 48.17" to;

S43° 30' 45.54" E172° 25' 26.36" (intersection Langdales Rd, Chattertons Rd) to;

S43° 29' 34.44" E172° 28' 57.29" to;

S43° 28' 22.05" E172° 30' 47.35" to;

S43° 26' 48.96" E172° 32' 08.12" to;

S43° 22' 48.81" E172° 33' 44.02" to;

S43° 21' 39.89" E172° 34' 11.15" (intersection Mill Rd, Bradleys Rd) to;

S43° 21' 40.80" E172° 36' 27.51" (intersection Main Drain Rd, Threlkelds Rd) to;

S43° 22' 17.06" E172° 37' 45.78" to;

S43° 22' 46.61" E172° 38' 39.51" to;

S43° 25' 00.01" E172° 41' 34.88" to;

S43° 27' 00.93" E172° 41' 57.76"

Vertical limits: SFC to 1500 ft

Classification: Class C

ATC Authority: Christchurch Tower 118.4

NZA855_x New East Sector in CH CTR/C

All the CTR to the east of the amended Instrument Sector

All that airspace bounded by a straight line from;

S43° 27' 33.72" E172° 40' 31.29" to;

S43° 29' 53.60" E172° 40' 16.34" to;

S43° 31' 22.39" E172° 41' 58.69" to;

S43° 32' 20.21" E172° 40' 44.66" to;

S43° 33' 16.26" E172° 38' 15.14" to;

S43° 33' 53.39" E172° 37' 56.64" (new corner point for overlying CTA) to;

S43° 35' 04.91" E172° 37' 21.07" to;

S43° 36' 16.39" E172° 35' 52.71" to;

S43° 35' 07.37" E172° 34' 14.99" (intersection Halswell Junction Rd, Halswell Rd, Sparks Rd) to;

S43° 34' 55.49" E172° 33' 46.41" to;

S43° 35' 28.25" E172° 31' 24.70" (intersection Trices Rd, Tosswill Rd) to;

S43° 30' 06.13" E172° 33' 38.01" to;

S43° 27' 33.72" E172° 40' 31.29" to;

Vertical limits: SFC to 1500 ft

Classification: Class C

ATC Authority: Christchurch Tower 118.4

NZA855_y New West Sector in CH CTR/C

All the CTR to the west of the amended Instrument Sector

All that airspace bounded by a straight line from;

S43° 22' 48.81" E172° 33' 44.02" to;

S43° 26' 48.96" E172° 32' 08.12" to;

S43° 28' 22.05" E172° 30' 47.35" to;

S43° 29' 34.44" E172° 28' 57.29" to;

S43° 30' 45.54" E172° 25' 26.36" (intersection Langdales Rd, Chattertons Rd) to;

S43° 29' 12.04" E172° 25' 42.09" (point on existing CTR boundary) then;

the arc of a circle of 1.5 NM radius centred on S43° 28' 36.0" E172° 23' 48.4" West Melton ARP from;

S43° 29' 12.04" E172° 25' 42.09" anticlockwise to;

S43° 27' 15.51" E172° 24' 43.74" (existing NZA855_C seq 11) then a straight line to;

S43° 26' 11.0" E172° 22' 42.5" (existing NZA855_C seq 12) to;

S43° 25' 33.0" E172° 21' 54.5" (existing NZA855_C seq 13) to;

S43° 22' 52.3" E172° 25' 11.2" (existing NZA855_C seq 14) to;

S43° 22' 14.94" E172° 26' 38.23" (point on existing CTR boundary) to;

S43° 22' 49.55" E172° 28' 47.28" (intersection N Eyre Rd, Two Chain Rd) to;

S43° 23' 31.56" E172° 29' 28.32" to;

S43° 22' 48.81" E172° 33' 44.02" to;

Vertical limits: SFC to 1500 ft

Classification: Class C

ATC Authority: Christchurch Tower 118.4

NZT858new Eyrewell within CH CTR/C

All that airspace bounded by a straight line from;

S43° 22' 49.55" E172° 28' 47.28" (intersection N Eyre Rd, Two Chain Rd) to;

S43° 26' 27.43" E172° 26' 16.21" to

S43° 26' 37.23" E172° 25' 44.72" to

S43° 26' 50.06" E172° 24' 24.13" to

S43° 26' 52.63" E172° 24' 02.50" (new point on CTR boundary) to

S43° 26' 11.0" E172° 22' 42.5" (existing NZT858 seq 6) to

S43° 25' 33.0" E172° 21' 54.5" (existing NZT858 seq 7) to

S43° 22' 52.3" E172° 25' 11.2" (existing NZT858 seq 8) to

S43° 22' 14.94" E172° 26' 38.23" (point on existing CTR boundary) to;

S43° 22' 49.55" E172° 28' 47.28" (intersection N Eyre Rd, Two Chain Rd) to;

Vertical limits: SFC to 1000 ft

NZA841mod CH CTA/C LL 1500 ft

This CTA is amended in two places; a kink in the eastern boundary to align with the expanded CTR and a triangular extension in the western boundary.

All that airspace bounded by a straight line from;

S43° 23' 28.90" E172° 56' 43.10" (existing NZA841 seq 1) to;

S43° 33' 42.02" E172° 45' 00.46" (existing NZA841 seq 2) to;

S43° 33' 53.39" E172° 37' 56.64" (new corner point on existing CTA boundary) to;

S43° 35' 04.91" E172° 37' 21.07" (new corner point over new CTR boundary) to;

S43° 36' 16.39" E172° 35' 52.71" (new corner point over new CTR boundary) to;

S43° 39' 37.80" E172° 32' 52.60" (existing NZA841 seq 4 Tai Tapu) to;

S43° 49' 05.50" E172° 21' 38.50" (existing NZA841 seq 5) then;

the arc of a circle of 20 NM radius centred on S43° 30' 15.1" E172° 30' 52.9" CH VOR/DME from;

S43° 49' 05.50" E172° 21' 38.50" clockwise to;

S43° 31' 24.40" E172° 03' 26.20" (existing NZA841 seq 6) then a straight line to;

S43° 29' 20.70" E172° 06' 23.90" (existing NZA841 seq 7 Darfield) to;

S43° 29' 59.00" E172° 12' 51.40" (existing NZA841 seq 8 Kirwee) to;

S43° 26' 25.77" E172° 18' 00.39" (new point on existing CTA boundary) to;

S43° 20' 23.66" E172° 25' 00.05" (new point) to;

S43° 18' 38.40" E172° 32' 11.90" (existing NZA841 seq 10 Fernside) to;

S43° 14' 56.30" E172° 40' 06.10" (existing NZA841 seq 11 Sefton) to;

S43° 11' 55.10" E172° 41' 51.70" (existing NZA841 seq 12) then;

the arc of a circle of 20 NM radius centred on S43° 30' 15.1" E172° 30' 52.9" CH VOR/DME from;

S43° 11' 55.10" E172° 41' 51.70" clockwise to;

S43° 23' 28.90" E172° 56' 43.10" (existing NZA841 seq 1)

Vertical limits: 1500 ft to 9500 ft

Classification: Class C

ATC Authority: Christchurch Control 120.9

NZA844mod CH CTA/C LL 2500 ft

This CTA is amended in one place to the north west of Christchurch due to the boundary movement of the CTA LL 1500 ft. The existing NZA844 seq 4 point (Watchtower) is moved slightly and a new point is added to reduce this CTA to match the adjoining 1500 ft CTA.

All that airspace bounded by a straight line from;

S43° 11' 55.1" E172° 41' 51.7" (existing NZA844 seq 1) to;

S43° 14' 56.3" E172° 40' 06.1" (existing NZA844 seq 2 Sefton) to;

S43° 18' 38.4" E172° 32' 11.9" (existing NZA844 seq 3 Fernside) to;

~~S43° 25' 29.0" E172° 19' 22.4" (existing NZA844 seq 4 Watchtower) to;~~

S43° 20' 23.66" E172° 25' 00.05" (new point) to;

S43° 26' 25.77" E172° 18' 00.39" (new point on existing CTA boundary) to;

S43° 29' 59.0" E172° 12' 51.4" (existing NZA844 seq 5 Kirwee) to;

S43° 29' 20.7" E172° 06' 23.9" (existing NZA844 seq 6 Darfield) to;

S43° 18' 20.8" E172° 17' 47.6" (existing NZA844 seq 7 Bennetts) to;

S43° 10' 17.9" E172° 28' 47.2" (existing NZA844 seq 8) then;

the arc of a circle of 20 NM radius centred on S43° 30' 15.1" E172° 30' 52.9" CH VOR/DME from;

S43° 10' 17.9" E172° 28' 47.2" clockwise to;

S43° 11' 55.1" E172° 41' 51.7" (existing NZA844 seq 1)

Vertical limits: 2500 ft to 9500 ft

Classification: Class C

ATC Authority: Christchurch Control 120.9

NZA845mod CH CTA/C LL 3500 ft

This CTA is amended in one place to the south east of Christchurch due to the boundary movement of the CTR and CTA LL 1500 ft. The existing NZA845 seq 8 point (Cashmere High School) is deleted replaced with three new points.

All that airspace bounded by a straight line from;

S43° 21' 58.1" E173° 10' 27.4" (existing NZA845 seq 1) to;

S43° 43' 54.0" E172° 35' 00.4" (existing NZA845 seq 2 Motukarara Racecourse) to;

S43° 59' 32.6" E172° 39' 46.5" (existing NZA845 seq 3) then;

the arc of a circle of 30 NM radius centred on S43° 30' 15.1" E172° 30' 52.9" CH VOR/DME from;

S43° 59' 32.6" E172° 39' 46.5" clockwise to;

S43° 31' 56.6" E171° 49' 43.0" (existing NZA845 seq 4) then a straight line to;

S43° 31' 24.4" E172° 03' 26.2" (existing NZA845 seq 5) then;

the arc of a circle of 20 NM radius centred on S43° 30' 15.1" E172° 30' 52.9" CH VOR/DME from;

S43° 31' 24.4" E172° 03' 26.2" anticlockwise to;

S43° 49' 05.5" E172° 21' 38.5" (existing NZA845 seq 6) then a straight line to;

S43° 39' 37.8" E172° 32' 52.6" (existing NZA845 seq 7 Tai Tapu) to;

~~S43° 33' 54.1" E172° 37' 30.5" (existing NZA845 seq 8 Cashmere High School) to;~~

S43° 36' 16.39" E172° 35' 52.71" (new corner point over new CTR boundary) to;

S43° 35' 04.91" E172° 37' 21.07" (new corner point over new CTR boundary) to;

S43° 33' 53.39" E172° 37' 56.64" (new corner point on existing CTA boundary) to;

S43° 33' 42.02" E172° 45' 00.46" (existing NZA845 seq 9 Southshore Peninsular) to;

S43° 23' 28.9" E172° 56' 43.1" (existing NZA845 seq 10) then;

the arc of a circle of 20 NM radius centred on S43° 30' 15.1" E172° 30' 52.9" CH VOR/DME from;

S43° 23' 28.9" E172° 56' 43.1" anticlockwise to;

S43° 10' 30.2" E172° 35' 17.6" (existing NZA845 seq 11) then a straight line to;

S43° 00' 35.7" E172° 37' 10.7" (existing NZA845 seq 12) then;

the arc of a circle of 30 NM radius centred on S43° 30' 15.1" E172° 30' 52.9" CH VOR/DME from;

S43° 00' 35.7" E172° 37' 10.7" clockwise to;

S43° 21' 58.1" E173° 10' 27.4" (existing NZA845 seq 1)

Vertical limits: 3500 ft to 9500 ft

Classification: Class C

ATC Authority: Christchurch Control 120.9