

**Airways New Zealand Petition**  
**to**  
**The Director of Civil Aviation**  
**to**  
**1. amend the Wellington CTR/C and CTA/C**  
**and**  
**2. delete and add VRPs**  
**and**  
**3. amend transit lane NZT656 Porirua**  
**and**  
**4. designate a new transit lane near Turakirae Head**

**14 December 2017**

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

1. amend the Wellington control zone (WN CTR/C NZA659) and sectors; and
2. amend Wellington control areas (WN CTA/C) NZA635 (LL 1500 ft), NZA637 (LL 2500 ft) and NZA640 (LL 4500 ft); and
3. amend the boundary of transit lane NZT656 Porirua; and
4. designate a new transit lane near Turakirae Head; and
5. delete four visual reporting point (VRP) and add four new VRP.

Accompanying documents:

1. Completed CAA Form 24071/01

# Requested amended WN CTR/C

The requested amended WN CTR/C (NZA659) is depicted on Diagram 1 below.

Co-ordinates for the amended CTR and other airspace boundary changes are given from page 19.

The upper limit remains at 2500 ft AMSL.

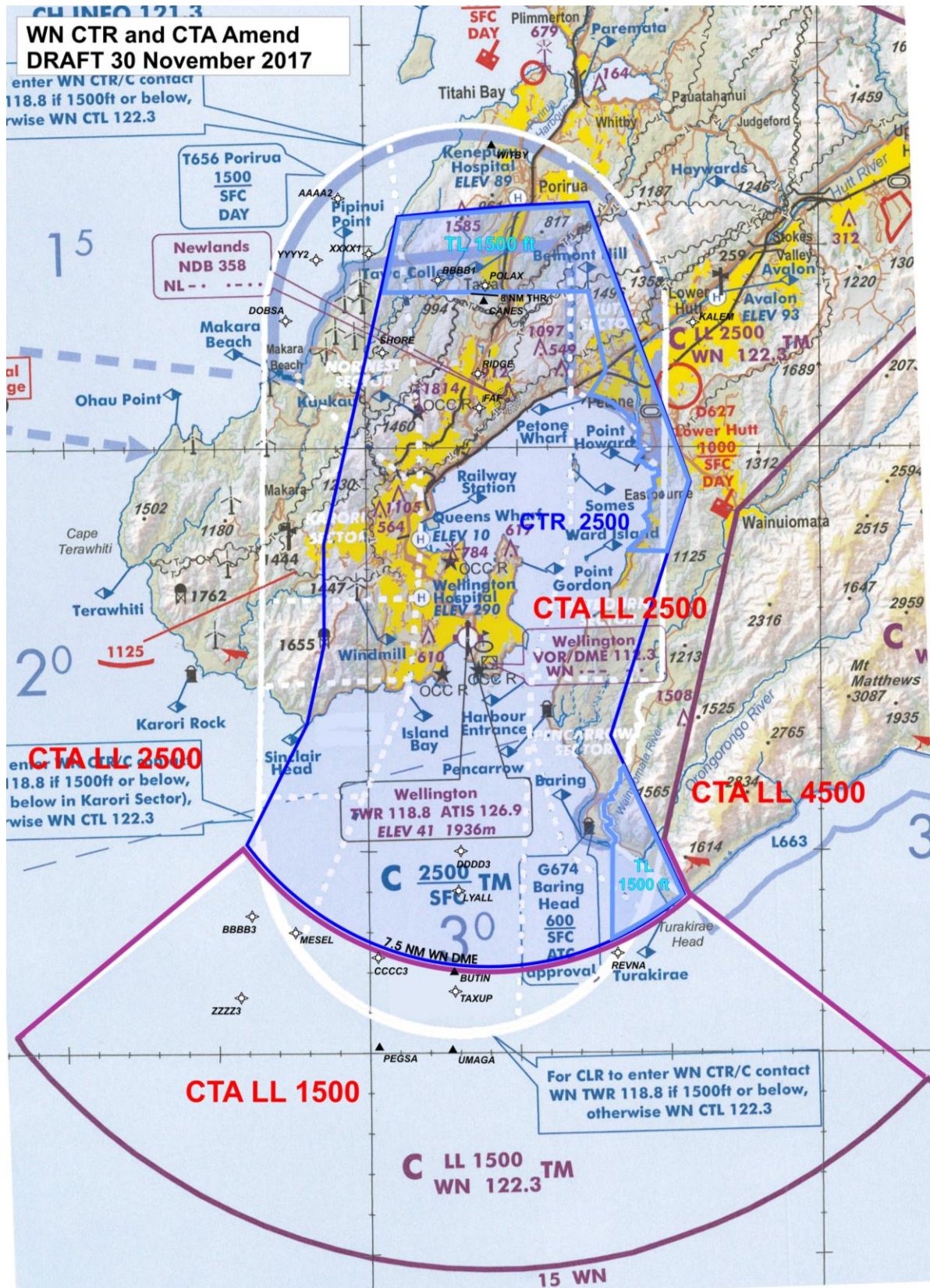


Diagram 1 Requested WN CTR. White lines are the existing CTR and CTA boundaries to be deleted. Existing and new waypoints for IFR procedures are included on the diagram.

## Reasons for amended WN CTR/C.

New performance based navigation (PBN) IFR approaches and departures have been designed for Wellington. Some of those procedures require small additions to the WN CTR and amendments to the WN CTA to ensure correct containment within controlled airspace.

Airways desires to reduce the size of the CTR/C as much as practical in order to release unneeded controlled airspace to Class G. This is in-line with CA Rule 71.

The reduced size of the requested WN CTR results in less area in which ATC are required to provide ATC service therefore allowing Aerodrome Control to be less distracted by 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.

Airways is aware of the future aims of some of its commercial customers (airline, airports). The proposed CTR and CTA designs are compatible with new IFP's (current or planned prior to the AIRAC cycle in November 2018) and this combination will support growth should there be demand without the need to make additional changes. Notwithstanding that, the possible future Wellington runway extension is not considered in this document.

## Points to note about the amended WN CTR/C.

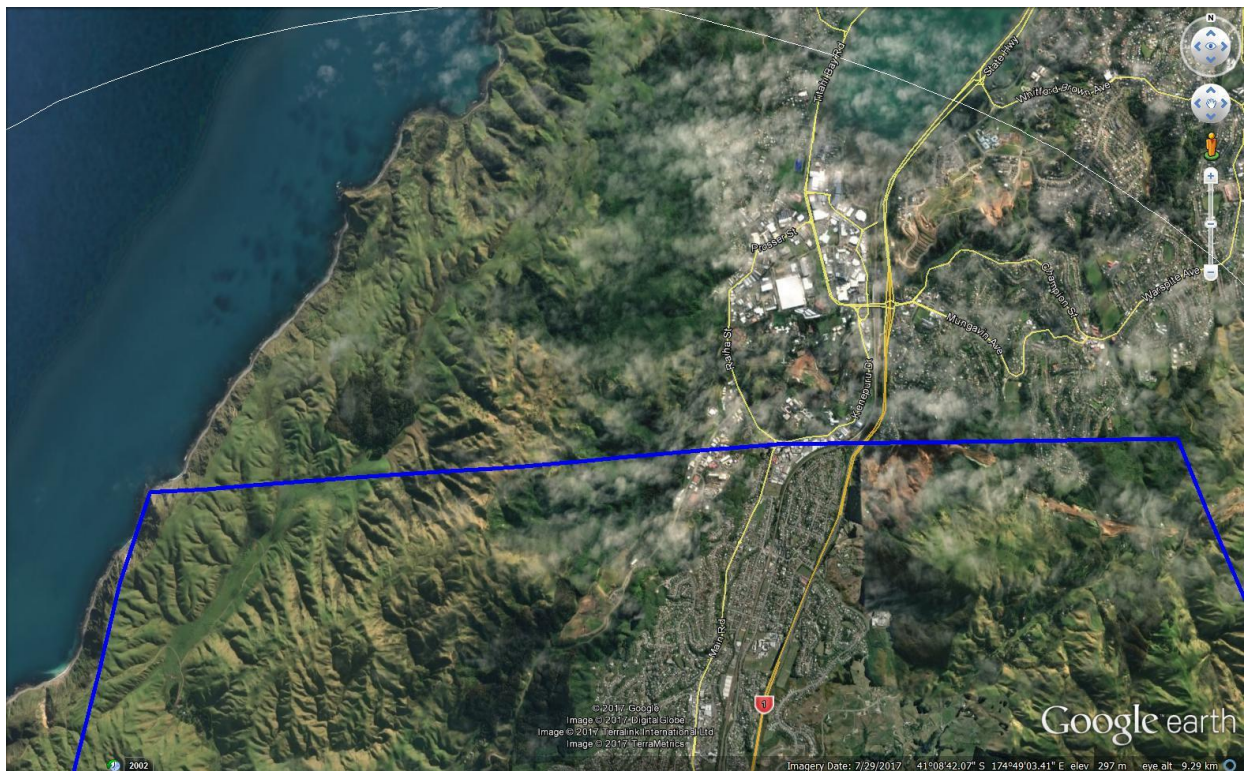
1. The design objectives of the requested CTR are to;
  - minimise as much as practical the WN CTR providing for containment of the instrument flight procedures to be utilised at Wellington (see page 7 for further details); and
  - have a simple CTR design as much as practical; and
  - to follow/utilise visual features for boundaries where practical without unduly expanding the CTR.
2. The requested CTR lies within the boundaries of the existing CTR except for expansions of the CTR near Eastbourne, Baring Head and Turakirae Head. There is also a small expansion of the CTR to the south-west.

These expansions of the CTR are necessary to provide controlled airspace containment of the planned new PBN departures.

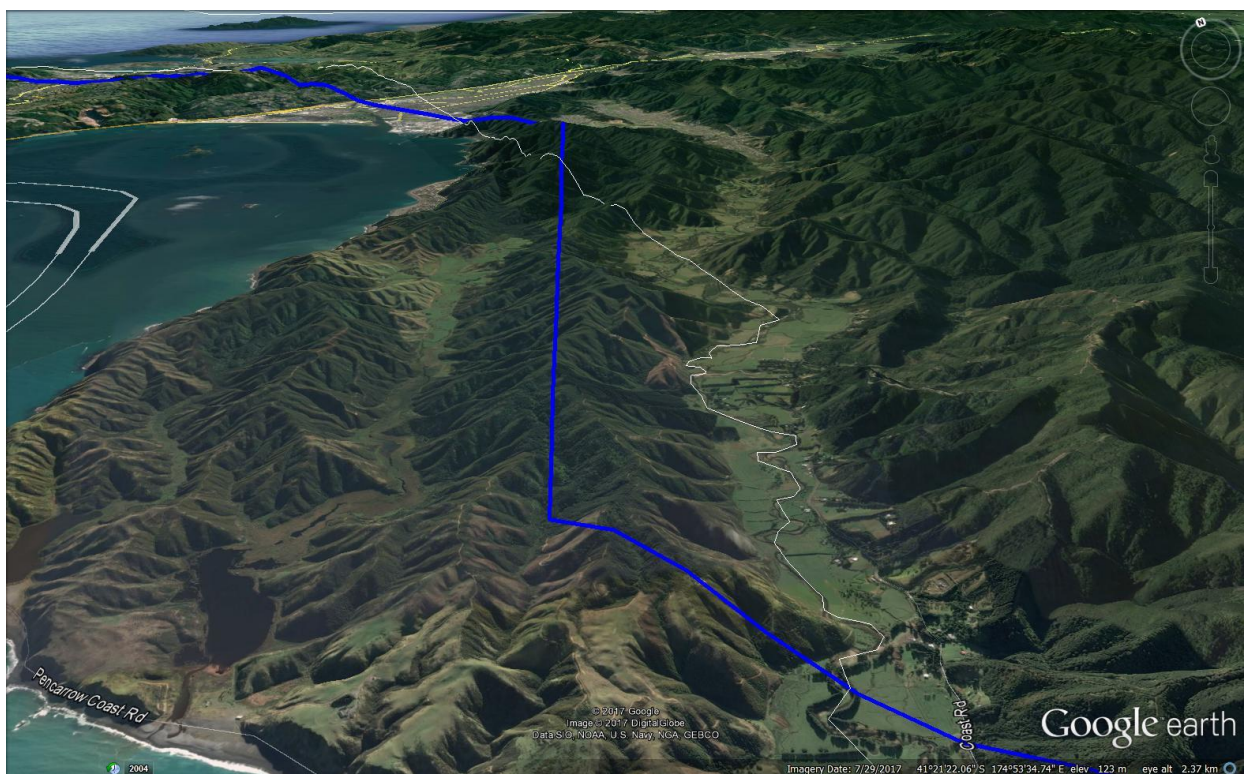
3. The planned new PBN departure to the north-east prevents the CTR boundary being brought in to the coastline along the Petone foreshore. However, a transit lane up to 1500 ft in the northern part of the CTR as depicted in Diagram 1 would be possible and would result in an airspace layout over Petone and Hutt Valley similar to the current layout. **NOTE:** The amended transit lane depicted in Diagram 1 is a later version than consulted with – refer later paragraph.
4. The requested CTR boundary lies approximately 4 NM to the east and 3.5 NM to the west of NZWN. This provides for containment of the circuits and IFR Cat A and B circling areas.

Cat C and D circling areas are not contained in accordance with the airspace design policy. For compliance with the policy, all Cat C and D approach charts should be annotated that the Cat C and D circling manoeuvre is not contained within controlled airspace. "CAT C/D circling airspace containment not assured".

- Visual features are used to define the CTR boundary where possible as shown in the Google images below depicting some of the boundaries of the requested CTR. (Blue line is requested new CTR boundary and thin white line is existing CTR boundary.)



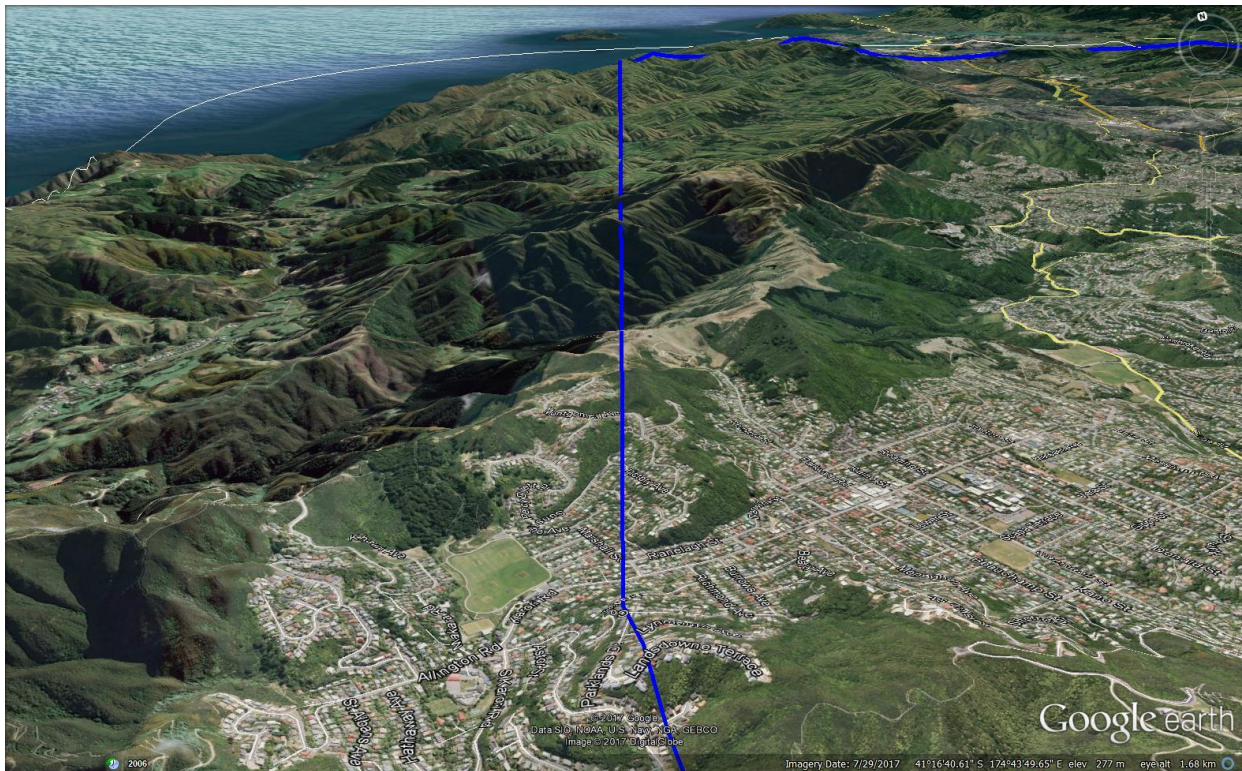
*Diagram 2 Requested CTR/C northern boundary which utilises the intersection of Main Road, Raiha Street and Kenepuru Drive.*



*Diagram 3 Requested CTR/C eastern boundary between Eastbourne and Baring Head.*



*Diagram 4 Proposed CTR/C south-eastern boundary near Turakirae Head.*



*Diagram 5 Proposed CTR/C western boundary. Possibly, the park immediately west of the boundary corner could be a better feature to use for the boundary corner.*

- The CTR boundaries have been designed to contain the instrument sectors of the instrument flight procedures listed in para 9.

For approaches, a 300 ft per NM (4.9%) profile is applied or a steeper profile where level constraints are published in the approach.

For straight-ahead departures, a 300 ft per NM airspace containment profile is used or a steeper profile where specified for the departure.

For the new PBN turning departures, an airspace containment profile of 420 ft per NM has been applied to contain their PDG 7%. This results in a narrower CTR than for a CTR designed for PDG 5% departures. Diagram 6 below depicts the requested WN CTR with the planned new PBN turning SIDs.

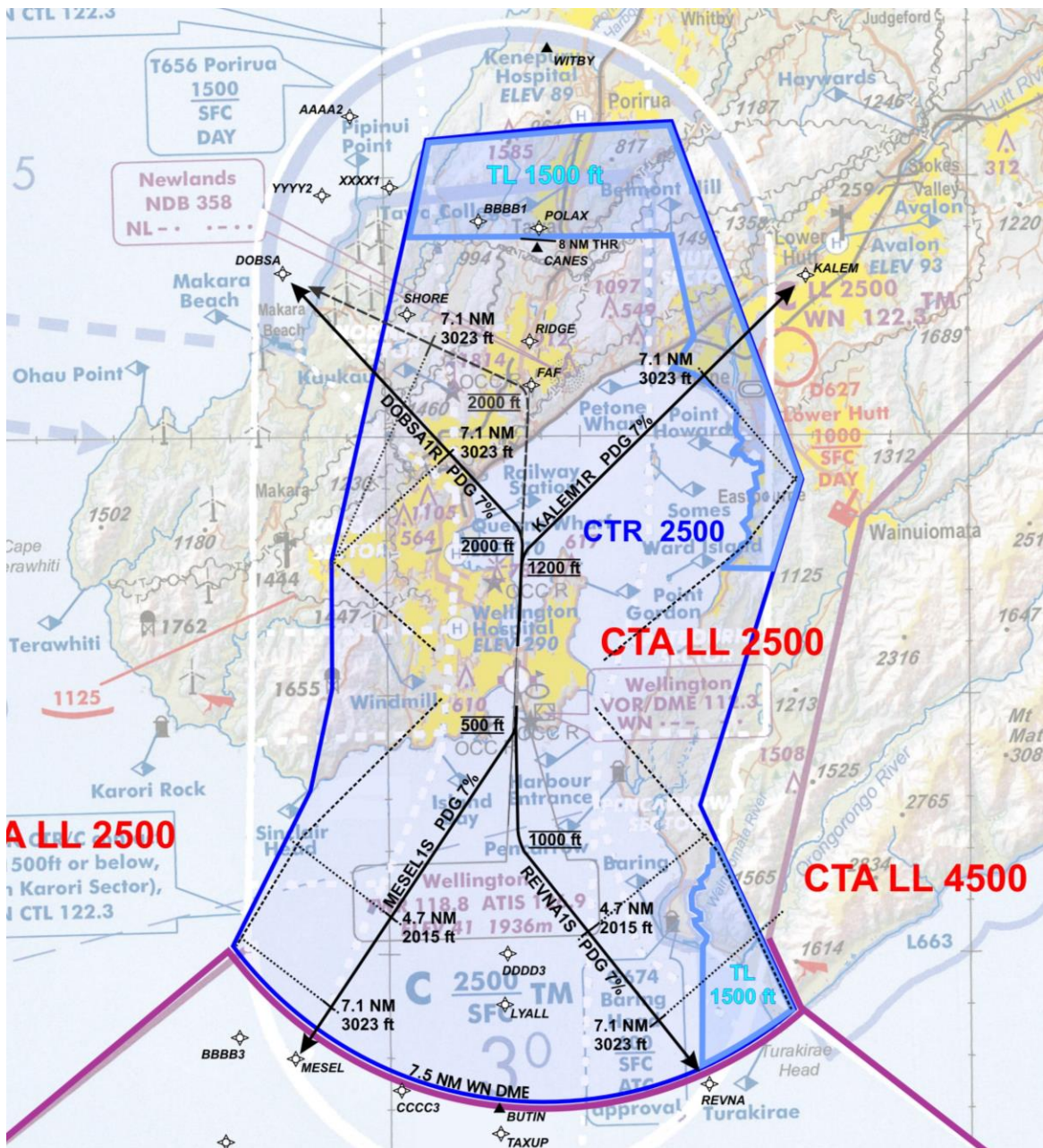


Diagram 6 Requested new CTR/C with planned new PBN turning SIDs.

- Containment of missed approach profiles is based on 5% gradient commencing from the missed approach point at the lowest MDA/DA for the approach. (Ref: AIPNZ ENR 1.5 – 2 para 1.3.9)
- Containment of straight-ahead radar SIDs utilises a VOR splay based on the RWY extended centreline. A minimum of 2 NM containment applies once the aircraft is established under vectors by radar control (Ref: Airways MATS RAC 6-24 S17.1)

9. Instrument flight procedures contained by the CTR (yet to be confirmed by Aeropath):
  - ILS/DME or LOC/DME RWY 16 approach – with current or amended straight ahead missed approach.
  - ILS/DME or LOC/DME RWY 34 approach
  - VOR/DME RWY 16 approach
  - VOR/DME RWY 34 approach
  - RNAV (GNSS) RWY 16 approach – with current or amended straight ahead missed approach.
  - RNAV (GNSS) Z RWY 34 approach
  - RNAV (GNSS) Y RWY 34 approach
  - New RNAV (RNP) Y RWY 16 AR approach (draft v1)
  - New RNAV (RNP) Y RWY 34 AR approach (draft v3)
  - Cat A and B circling areas to the east (circling west of 16/34 not permitted)
  - RNAV Visual Arrivals RWY 16
  - RNAV Visual Arrivals RWY 34
  - NZWN2A Radar SID RWY 16
  - NZWN1B Radar SID RWY 34
  - New MESEL1S RNAV Departure (PDG 7% - turn at 500 ft)
  - New REVNA1S RNAV Departure (PDG 7% - turn at 1200 ft) (*Aeropath yet to design/extend the portion after REVNA to ensure airspace containment through 5000 ft*)
  - New POLAX1P RNAV Departure (draft v4)
  - New POLAX1R RNAV Departure (draft v1)
  - New DOBSA1R RNAV Departure (PDG 7% - turn at 2000 ft)
  - New KALEM1R RNAV Departure (PDG 7% - turn at 1200 ft)
  
10. IFR procedures not fully contained or containment not assured:
  - Cat C and D circling areas in accordance with airspace design policy (no containment required as there are straight-in approaches available)
  - Visual approaches RWY 16 and RWY 34 – containment not assured depending on tracking and descent profile.
  - WEST6 Visual Departure – containment below 3000 ft not likely
  - EAST5 Visual Departure – containment below 3000 ft not assured
  - Visual departures RWY 16 and RWY 34 – containment not assured depending on tracking and climb profile.
  
11. Current instrument flight procedures to be disestablished with introduction of the new CTR and CTA:
  - PEGSA3 Departure
  - DULEX3 Departure
  - VIPET3 Departure
  - UNRIT2 Departure
  - DAMBO9 Departure
  - RUGDI5 Departure
  - WITBY1A Departure
  - WITBY2B Departure

12. Northern transit lane

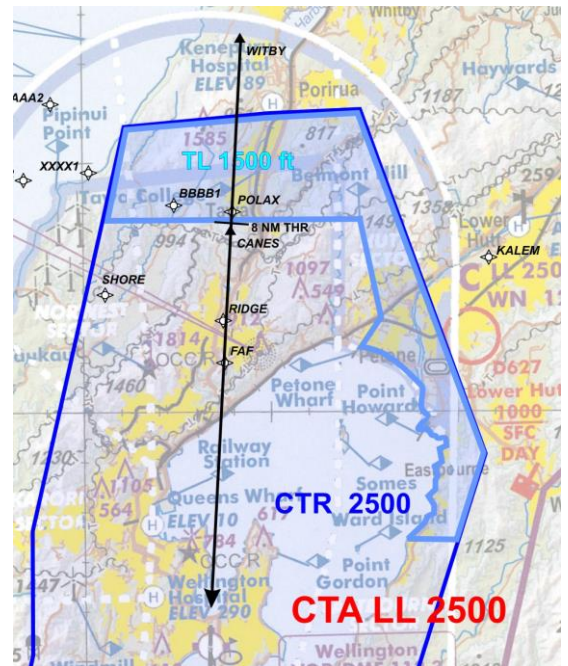
**NOTE:** The requested transit lane depicted in Diagram 7 and 8 is a later version than consulted with – the inner boundary between Belmont Hill VRP and Petone Wharf being changed.

The inner boundary of the northern transit lane under the final approach track is 8 NM from RWY 16 THR and therefore is not infringing containment of the approach – including 1 NM buffer allowance for visual fix error.

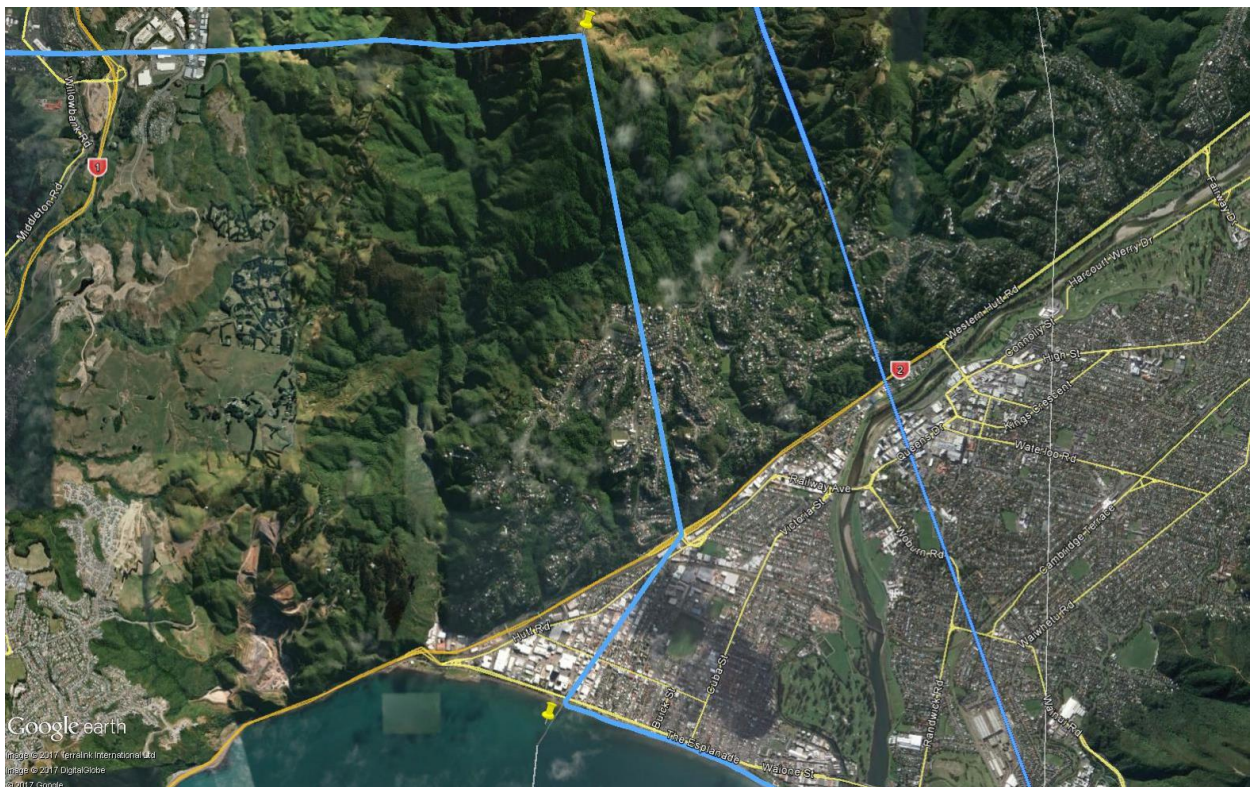
Feedback from local helicopter pilots was a desire for the inner boundary to be further south to include the power lines depicted on VNC – about 0.8 NM further south. This possibility was explored but the result was that the transit lane would infringe containment slightly of the approaches and departures applying the 300 ft per NM airspace containment profile and a 1 NM buffer being included due to the probability that the power lines are not sufficient to be a prominent geographical feature.

*(Note: If the upper limit of the transit lane was lowered to 1400 ft AMSL, then it should be possible to include the power lines in the transit lane – but Airways is not requesting this.)*

*Diagram 7 Requested amended northern transit lane (T656mod).*



As shown on the Google Earth image Diagram 8 below, the transit lane inner boundary goes from Belmont Hill VRP to the roundabout on Western Hutt Road to the point where the Petone Wharf meets the Petone foreshore. It was not possible to utilise the Petone Wharf VRP as a corner for the transit lane boundary as that would have resulted in the transit lane very slightly infringing the Instrument Sector.



*Diagram 8 Google Earth image of requested amended northern transit lane inner boundary near Petone*



13. Turakirae transit lane

RTF comms between WN Tower and aircraft along the East Coast approaching Turakirae Head ('around the corner') at or below 1500 ft is often not possible – the aircraft need to be west of Turakirae Head before good comms is reliably established. It would generally not be possible for an aircraft to turn the corner at Turakirae without first obtaining a clearance to enter the CTR – that is likely not possible due to the RTF comms issue. A transit lane would address this lack of comms situation and avoid aircraft having to track out to sea whilst requesting and receiving a clearance to enter the CTR.

Feedback from a local GA operator copied below indicates a need for a small transit lane to be established along the coast west of Turakirae Head.

A transit lane would be perfect for aircraft entering or exiting the Orongorongo valley and for aircraft to hold, to stay out of the lee of Turakirae Head in a westerly or north westerly wind. My concern here is that if there is a wind shift or increase, particularly to a strong westerly or north westerly and a pilot chooses to return, they would typically hold to the south or slightly southwest of Turakirae head to remain out of the lee. In the proposed airspace change, the new airspace would not allow for this. This scenario does happen on occasion as the weather is not always predictable. I have a safety concern here that a pilot will either bust airspace to clear the lee of Turakirae head or risk holding in severe turbulence whilst potentially getting caught in downdraught.

In response to the above issues, Airways is proposing a new transit lane up to 1500 ft AMSL is established between Turakirae Head and Baring Head as shown on Diagram 9 below. This additional transit lane has not been consulted with local operators – it is designed in response to feedback received from earlier consultation.

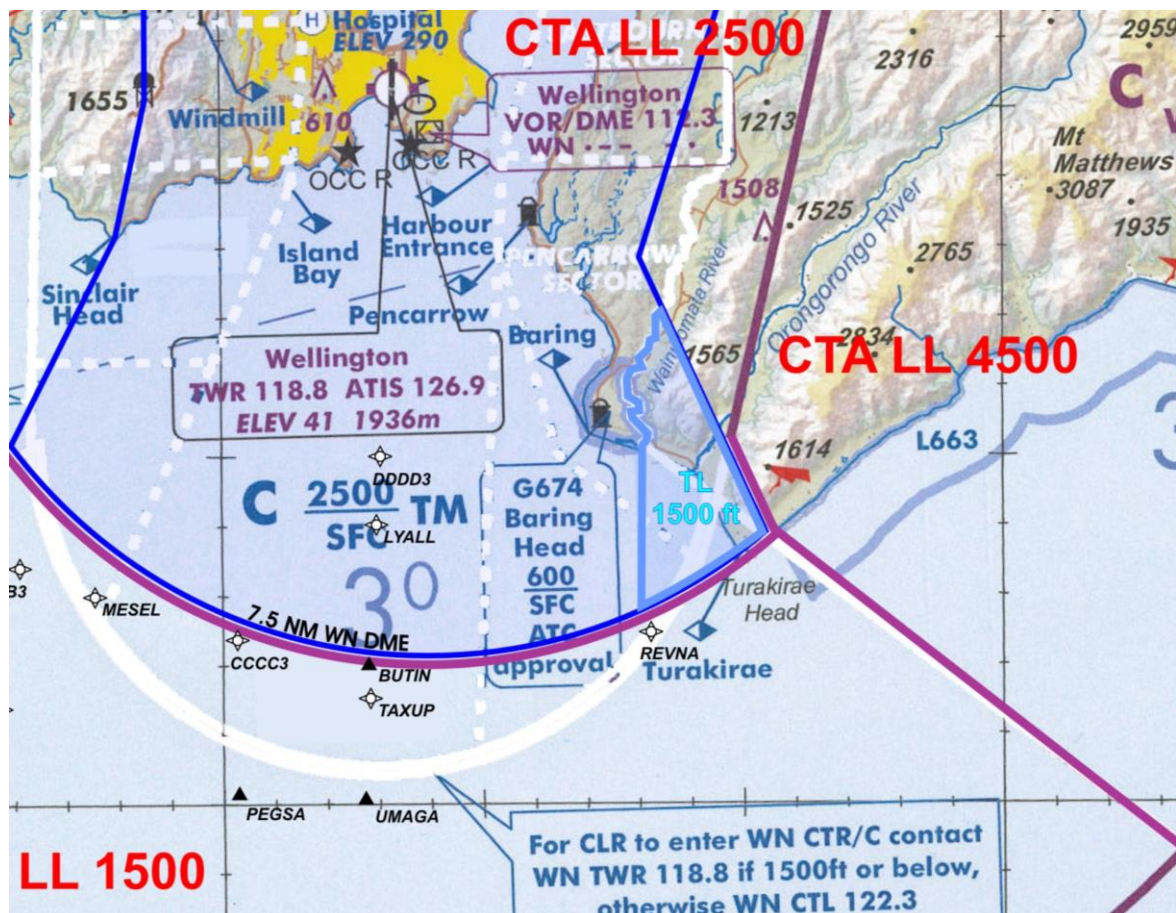


Diagram 9 Requested new transit lane on the coast west of Turakirae Head.

Note: Rather than establish a transit lane, extending the 1500 ft CTA northward was explored. This was found to be not possible due to terrain infringing the 700 ft gap required between terrain and the lower limit of CTA. Moving the CTR and CTA boundary westward slightly to avoid that high terrain would result in less than required lateral airspace containment buffer from the planned REVNA departure.

The western boundary of the transit lane would follow the Wainuiomata River, the same as the existing CTR boundary, to the coast and from there seaward of the coast. At its widest at the southern boundary the transit lane is 1.5 NM seaward of the coast.

NZG674 Baring Head (SFC to 600 ft) adjoins the transit lane.

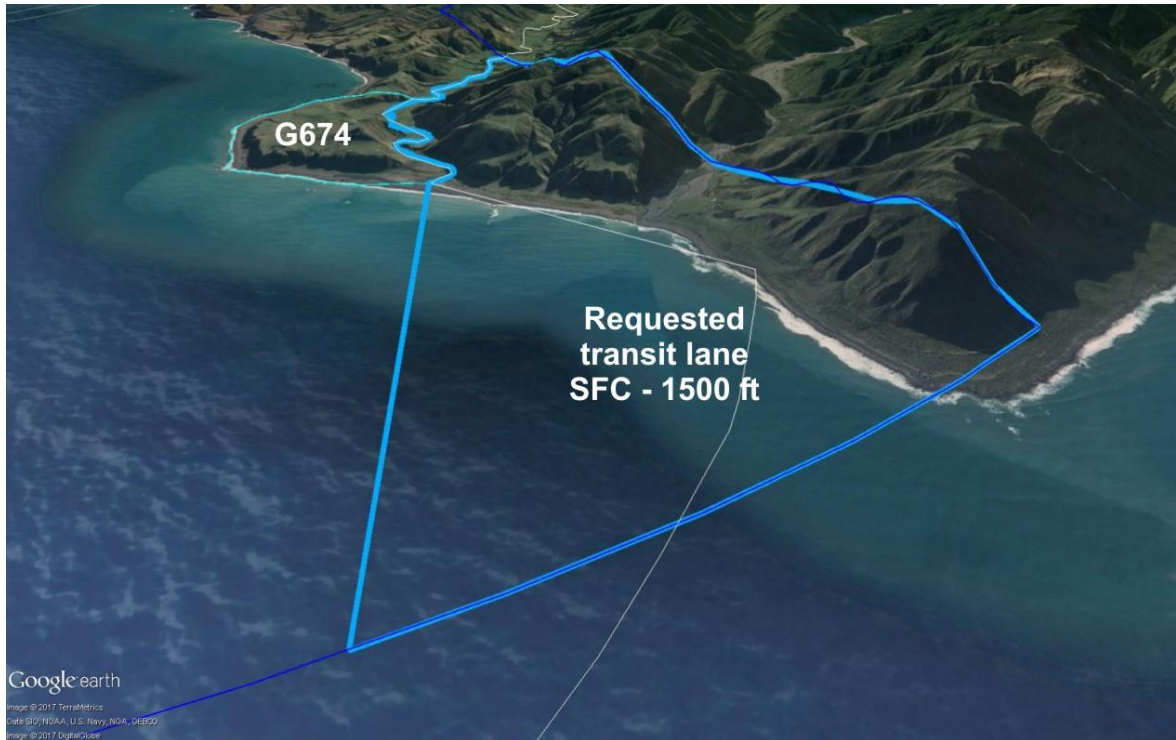


Diagram 10 Google Earth image showing:  
 requested transit lane - thick blue line    existing G674 – thin turquoise line  
 requested CTR boundary – thin blue line    existing CTR boundary – white line

As shown on Diagram 11 below, the transit lane would not infringe airspace containment of the planned new REVNA departure. Applying 420 ft per NM to contain the departure's 7% PDG, the profile passes 2015 ft at 4.7 NM from THR, 0.7 NM before reaching the transit lane boundary. The transit lane boundary follows the river, a prominent geographical feature, therefore a 1 NM buffer does not need to be added.

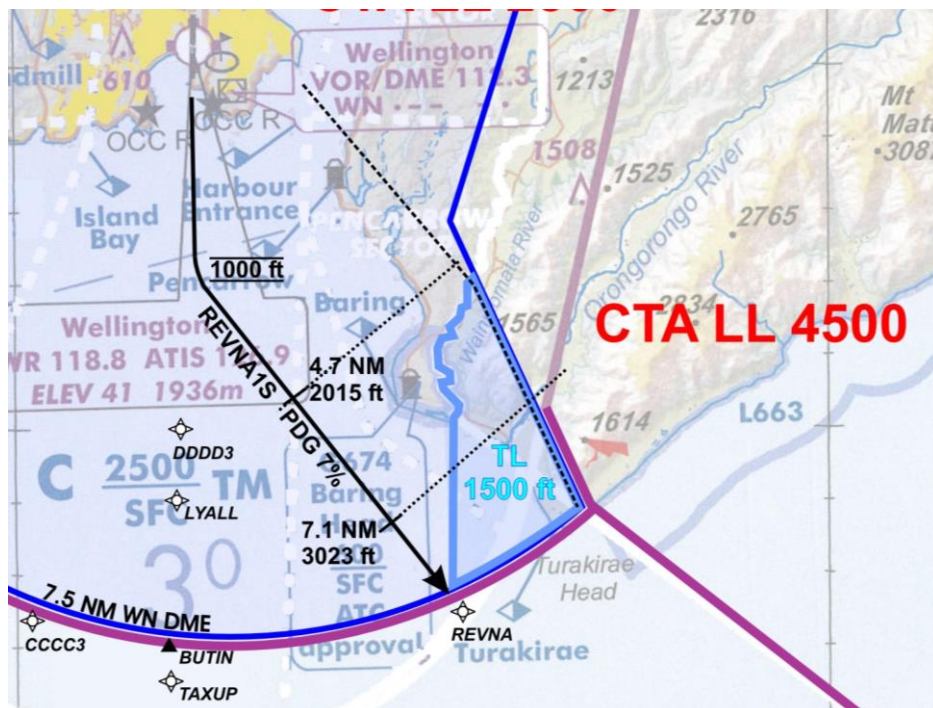


Diagram 11 Planned new REVNA departure is not infringed by the transit lane.

14. Baring Head gliding operations

The requested CTR includes retaining G674 Baring Head as it is currently defined.

The draft CTR that Airways consulted with in September had G674 surrounded by CTR. The gliding operator of G674 raised strong issue with that proposal – some of their feedback copied below.

G674 is a local low ridge soaring site and, more significantly, a launch site for Club pilots to access the neighbouring Class G airspace up to 2500ft east of the eastern boundary. From the Baring Head launch site we can fly east to Turakirae Head and, conditions permitting, continue onto Palliser Bay for landings at Ocean Beach or Lake Onoke. Club pilots launching at the Ocean Beach launch site in Palliser Bay can also make the reverse flight to land within G674 at Baring Head. These flights are only possible by ridge soaring the coastal slopes. In order to cross the Orongorongo River Valley, hang glider and paraglider pilots need to gain as much altitude as possible either side, and commonly this is most of the 2500ft currently available. We fly in this area when the wind conditions are S to SE, 6 to 20 knots and no precipitation.

Your current proposal of wrapping G674 in the CTR would cut off the launch site from our higher soaring ridges. A GAA extension to the eastern boundary at 600ft would also effectively cut off the area because the terrain just east of the Wainuiomata River mouth does not support ridge soaring at that level, and the Orongorongo Valley would be impassable from such an altitude.

In order for [operator] pilots to maintain current operations in this area we urge you to amend your proposal to either:

1. That the proposed CTR boundary in this area be aligned with the coastline, thereby creating a strong geographic visual reference for all pilots of the CTR boundary. If containment of PBN IFR left turn departures from runway 16 at WN (primarily REVNA15 RNAV Departure) cannot be ensured within this boundary, then
2. The retention of G674 with current boundaries and height for local low ridge soaring flights, and the formation of a new GAA to the east of G674, with an upper limit of 2500ft, which would be activated in conjunction with G674 for the hours when meteorological conditions are favourable for the flights detailed above, see Fig 1.



Fig.1 Proposed GAA – defined by solid black line

In response to that feedback, we did review the CTR design and confirmed that containment of the planned REVNA departure prevents the CTR boundary being brought in to the coast. Diagram 11 on page 10 shows the REVNA departure along with the eastern boundary of the instrument sector for that departure (the black dashed line). The requested CTR follows that eastern boundary of that instrument sector. Clearly, the coastline at and south of Baring Head, and G674, are significantly within that instrument sector for the REVNA departure.

We have also carefully considered the operator's requested alternative of establishing a second GAA to the east of G674 up to 2500 ft as shown in their diagram copied on the previous page. Airways is opposed to the establishment of a GAA such as this because a minimum 2 NM radar or 500 ft vertical separation needs to be applied between the GAA and aircraft flying the REVNA departure or a visual departure to the east or a visual approach around Turakirae Head – this creates additional controller workload in an already often busy situation. Also, if aircraft on a visual approach around the coast via Turakirae Head will come within 2 NM of the GAA they will need to maintain 3000 ft until they are 2 NM clear of the GAA. This could result in the aircraft ending up higher than desirable on approach.

Whilst it is not what the operator has asked for and it may not alleviate the issues raised, our hope is that the requested new transit lane up to 1500 ft by Turakirae Head will permit at least some glider operations to the east of G674.

15. Western CTR cut out for hang glider and paragliding operations

Feedback from the glider operator also strongly urged Airways to consider a small change to our proposed CTR to the west near Sinclair Head – Owhiro Bay to facilitate glider operations.

The area concerned is shown on the diagram below. The green shaded area is outside the instrument sectors for the WN approaches and departures and is clear of the WN circuit area. The CTR boundary that the operator is requesting is marked on their diagram below by the solid black line from the radar symbol to the western point of Owhiro Bay to Sinclair Head VRP so that that triangular area would be outside the CTR.



Airways has considered this request. That triangular area is not needed for the containment of instrument procedures or the aerodrome vicinity/circuits so the CTR boundary could follow the requested black line. **However, we have not amended our requested CTR to incorporate that change because;**

1. we are unsure what impact the hang gliding and paragliding operations (perhaps intensive at times) could have on VFR aircraft arriving and departing through or near that area. Our experience shows that VFR operations, including commercial operations by Caravan aircraft, do regularly occur on and inland of the coast in that area:
2. we believe that a VFR arriving aircraft could get trapped without a clearance in that triangular indentation in the CTR – it can enter that triangular area before obtaining an ATC clearance to enter the CTR and if a clearance was not immediately issued, where would the aircraft track? There may be insufficient room for it to turn to remain outside the CTR which would result in an airspace infringement:
3. we believe that an indentation in the CTR boundary like that is probably contrary to the airspace design objective of simplicity of design.

It may be that the glider operator incorporates this request in any feedback they may make in response to CAA's consultation of our petitioned CTR change.

A possible CTR boundary that may address some of our concerns raised above is depicted in Diagram 12 below. **Airways is not petitioning for this** but would not have any objections if this CTR boundary was designated by CAA. Note though that the exact location of the Owhiro Bay corner is critical as it is very close to the edge of the instrument sector for the west-turning departure. If this goes ahead, Airways would need to be involved with the final design.

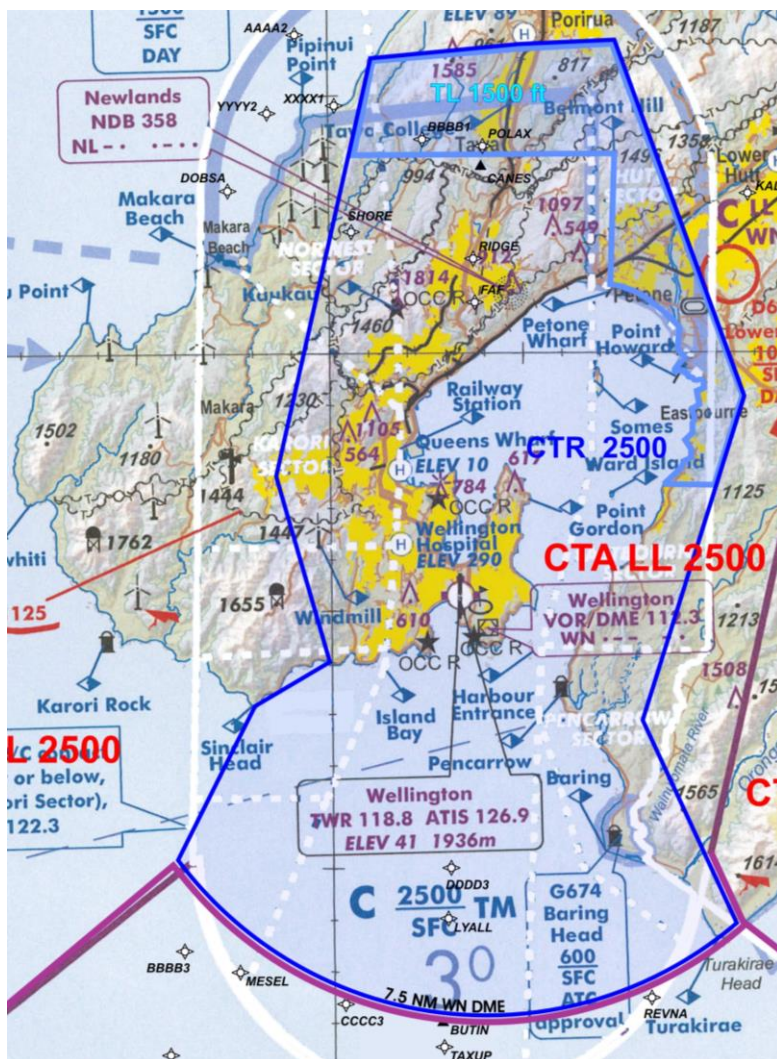


Diagram 12 Possible CTR western boundary.

## Amended WN CTR/C Instrument Sector.

Along with changes to the WN CTR, Airways is requesting that all of the existing WN CTR sectors are disestablished and replaced with the seven sectors depicted in black in Diagram 13 below.

The sectors are defined from page 20.

Airways is petitioning for those CTR sectors to be promulgated on VNC.

Feedback received from a helicopter operator at Queens Wharf heliport (NZQW) raised concern about the impact a new instrument sector would have on their operations to and from Queens Wharf and the Lambton ARR/DEP Area and associated LAMBTON ARRIVAL and LAMBTON DEPARTURE (refer AIPNZ NZQW AD 2 – 35.1).

The requested instrument sector is a combination of the individual sectors for the RWY 16 approaches, RWY 34 missed approaches and RWY 34 'straight ahead' departures.

The Lambton ARR/DEP Area infringes the existing Instrument Sector, the requested combined instrument sector depicted opposite and all of the individual sectors for the IFR procedures.

Neither the combined sector nor any of the individual sectors could be made narrower so that they would not be infringed by the Lambton ARR/DEP Area.

The AIPNZ-stated co-ordinates for NZQW are outside the existing instrument sector by a few metres. Establishing which, if any, individual instrument sectors for existing and new IFR procedures would not be infringed by NZQW would require further work by Aeropath.

The on-going ATC management of helicopter operations at NZQW needs to be determined. Airways sees that process as being separate from this petition for CTR and depicted instrument sector change.

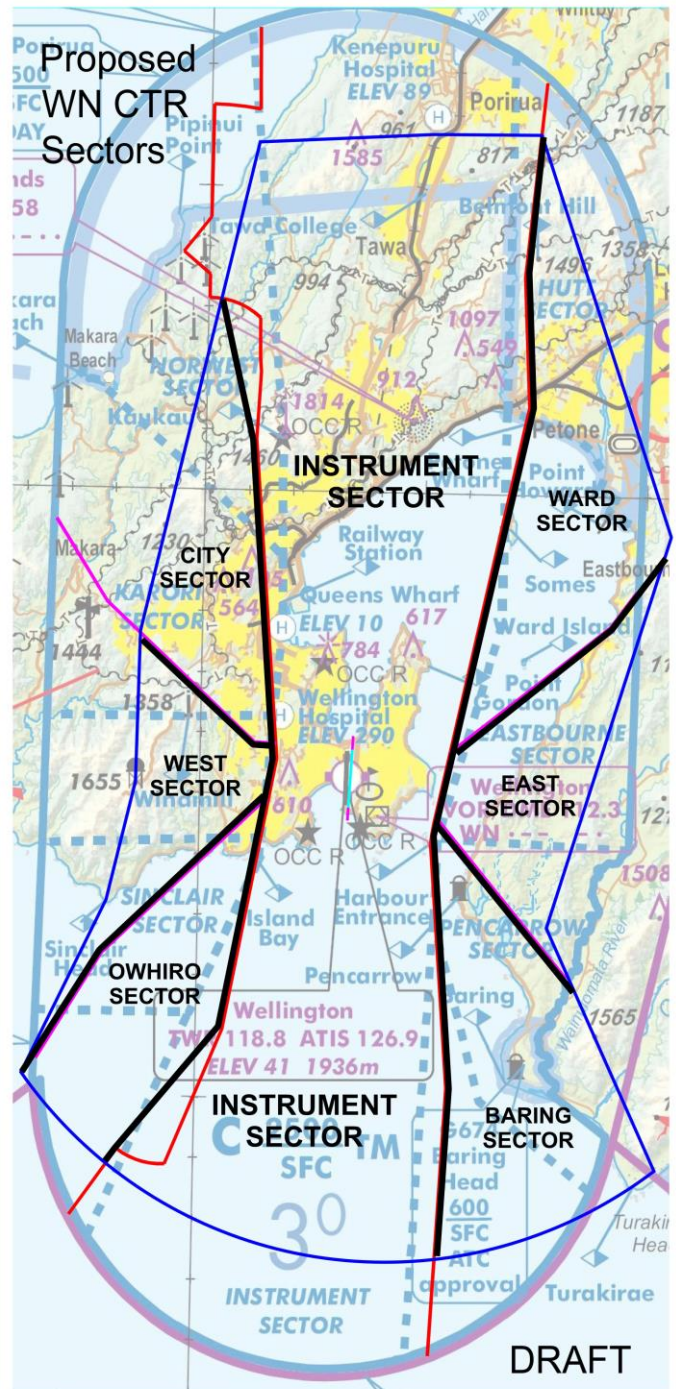


Diagram 13 Requested new WN CTR sectors.

## Visual Reporting Points (VRP)

### Visual Reporting Points - to be disestablished

It is requested that the following VRP are disestablished.

Tawa College – but only if requested ‘Grenada’ VRP is established

Railway Station

Kaukau

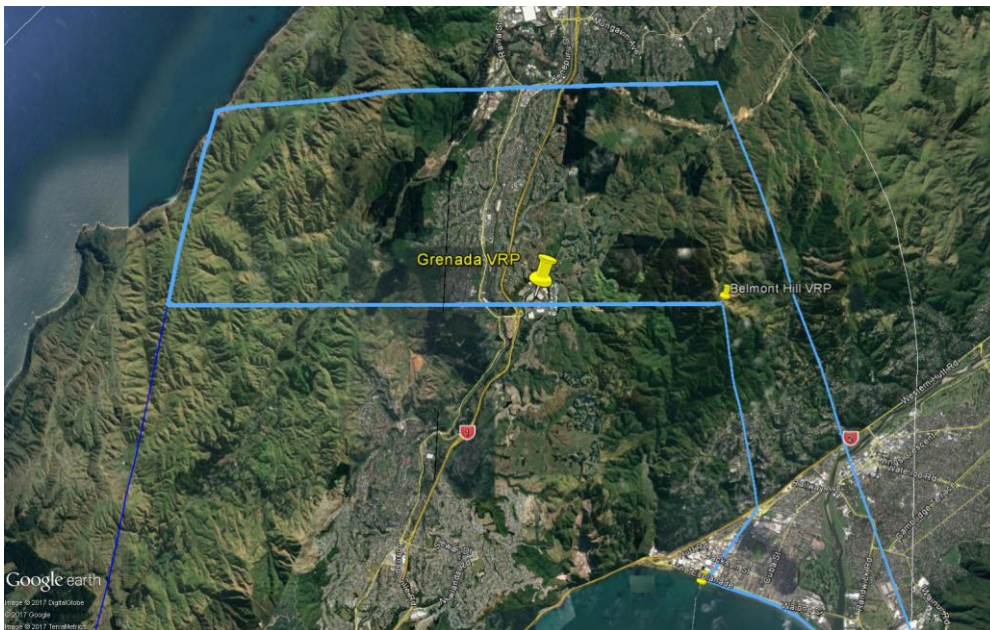
Windmill – but only if requested ‘Golf Course’ VRP is established

### Visual Reporting Points – new to be established

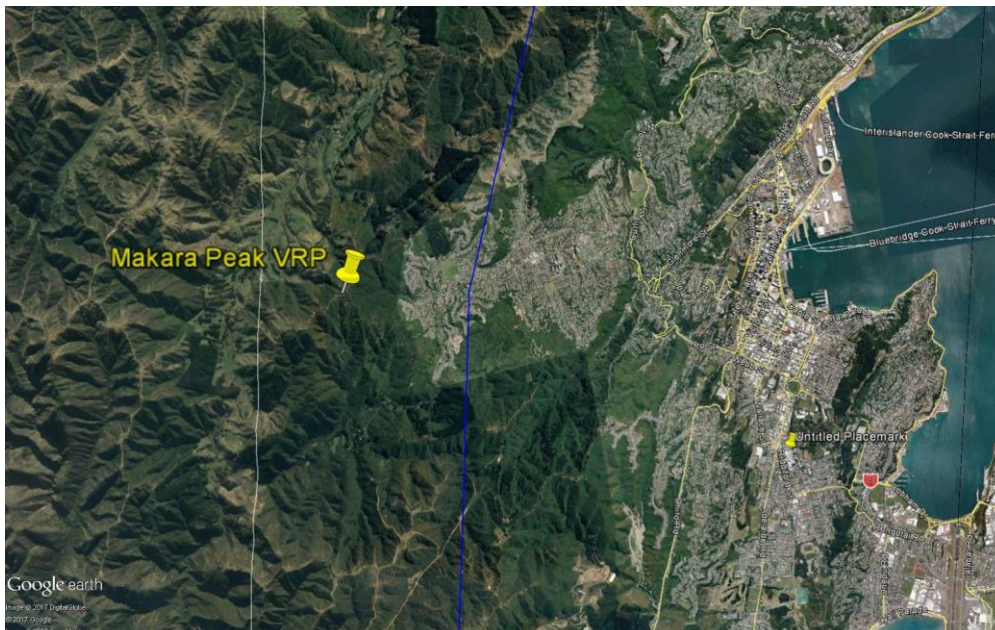
It is requested that the following new VRP are designated and promulgated on VNC.

**“Grenada”**: S41° 10’ 56.9” E174° 50’ 08.6” Industrial buildings near Tawa.

If this VRP is designated then existing ‘Tawa College’ VRP can be disestablished.



**“Makara Peak”**: S41° 17’ 20.4” E174° 42’ 25.0” Prominent Peak west of Wellington.



**“Observatory”**: S41° 17' 03.73” E174° 46' 01.09” Carter Observatory building on hill top west of Wellington.



**“Golf Course”**: S41° 19' 33.61” E174° 46' 17.38” Berhampore golf course 1.6 NM west of Wellington.

If this VRP is designated then existing 'Windmill' VRP can be disestablished.

This VRP would be a defining point in new VFR arrival and departures designed for the requested CTR. It would also be useful for tracking instructions for the likes of helicopters tracking to/from Wellington Hospital – Sinclair Head via west of Golf Course.





## Consultation carried out by Airways

Airways presented the initial draft WN CTR proposal at a user meeting held at Wellington Aero Club on 28 September 2017.

There were eight attendees from local GA, hang gliding and paragliding operator, Sounds Air and Wellington International Airport Ltd. Additionally, a CAA representative attended.

The Airways understanding of the feedback and discussions at the meeting are;

1. Helicopter operators requesting the southern boundary of the northern transit lane be moved further south to get the power lines out of the CTR (into the transit lane).

Airways position: Considered but not possible – refer page 8

2. A request for the addition to VNC of a hang glider symbol near D627 to warn pilots of the gliding activity that occurs there.

Airways position: The activity occurs outside the existing CTR and requested CTR and is not directly related to this request for amended CTR so we are not pursuing this.

3. The paragliding and hang gliding operator of G674 advised that surrounding G674 with CTR would cut off their operations to and from the east. This operator also submitted written feedback after the meeting.

Airways position: refer '14. Baring Head gliding operations' on pages 11 and 12.

4. RTF issues to the east of Turakirae Head low level were mentioned by Airways. Discussion followed with issues about that being raised by a local GA operator. There was talk that a new transit lane in that area would address the issues raised by the operator. This operator also submitted written feedback after the meeting.

Airways position: refer '13 Turakirae transit lane' on pages 9 and 10.

5. The proposed eastern boundary of CTR was mentioned by Airways and the possibility of the boundary being moved to the next smaller valley to the west. There was no request for the boundary to be moved.
6. There was some discussion about the proposed western boundary including a possibility of using Makara Peak for a boundary corner point. End result was to leave the proposed boundary as is and make Makara Peak a VRP.
7. Some discussion about the CTR boundary south west of NZWN. Hang glider operator indicated a strong desire to utilise some of the airspace in that area that is not needed for containment of procedures. This operator also submitted written feedback after the meeting.

Airways position: refer '15. Western CTR cut out for hang glider and paragliding operations' on pages 12 and 13.

Airways received written feedback from;

1. a helicopter operator at Queens' Wharf heliport raising concerns about how an amended Instrument Sector will affect their operations.

Airways position: refer **Amended WN CTR/C Instrument Sector** on page 14.

2. Local paraglider and hang glider operator regarding impact surrounding G674 with CTR would have on their operation and offering some solutions.

Airways position: refer '14. Baring Head gliding operations' on pages 11 and 12.

That operator also requested amended CTR boundary west of Wellington

Airways position: refer '15. Western CTR cut out for hang glider and paragliding operations' on pages 12 and 13.

3. Local regular GA operator regarding issues with proposed CTR near Turakirae Head and suggesting establishment of a transit lane in that area.

Airways position: refer '13 Turakirae transit lane' on pages 9 and 10.

That operator also made comment regarding retaining some of the existing IFPs.

Airways position: Airways responding directly with the operator.

That operator also made comment about bringing in new PBN procedure changes at the same time as the airspace changes.

Airways position: Airways responding directly with the operator.

4. Airways met with Wellington International Airport Ltd (WIAL) representatives on Wednesday 6th December at Wellington Airport offices to brief them on the proposed changes for WN CTR/C and WN CTA/C. The WIAL representatives were comfortable with the proposal and did not request any changes. We did discuss some of the new boundaries in detail and the reasons for changes (new design criteria or local customer feedback).

## **Amended CTR, sectors, CTA and transit lane definitions**

30 November 2017 draft version

### **Draft CTR co-ordinates**

All that airspace bounded by a straight line from;

S41° 08' 55.25" E174° 52' 25.86" to;

S41° 15' 40.20" E174° 55' 40.17" to;

S41° 17' 35.11" E174° 54' 51.50" to;

S41° 22' 02.69" E174° 52' 59.07" to;

S41° 22' 48.26" E174° 53' 28.72" intersection CTR boundary and Wainuiomata River to;

S41° 24' 45.36" E174° 54' 44.50" to;

S41° 25' 55.64" E174° 55' 30.36" then;

the arc of a circle of 7.5 NM radius centred on S41° 20' 14" E174° 49' 01" WN DME from;

S41° 25' 55.64" E174° 55' 30.36" clockwise to;

S41° 24' 40.65" E174° 40' 58.76" then;

a straight line from;

S41° 24' 40.65" E174° 40' 58.76" to;

S41° 21' 43.8" E174° 42' 57.6" Sinclair Head VRP to;

S41° 19' 47.37" E174° 43' 31.99" Hawkins Hill radar site to;

S41° 17' 18.97" E174° 43' 37.55" to;

S41° 11' 01.45" E174° 45' 33.04" to;

S41° 09' 10.30" E174° 46' 06.87" to;

S41° 08' 56.94" E174° 49' 59.67" Y intersection of Main Rd, Raha St and Kenepuru Dr to;

S41° 08' 55.25" E174° 52' 25.86"

Vertical limits: SFC to 2500 ft

Classification: Class C

ATC Authority: Wellington Tower 118.8 120.0

### **Draft northern transit lane T656mod co-ordinates**

All that airspace bounded by a straight line from;

S41° 08' 55.25" E174° 52' 25.86" to;

S41° 15' 40.20" E174° 55' 40.17" to;

S41° 17' 35.11" E174° 54' 51.50" to;

S41° 17' 28.32" E174° 53' 36.67" then;

a line following the coast and Petone foreshore (as per existing T/L boundary) from;

S41° 17' 28.32" E174° 53' 36.67" to;

S41° 13' 38.16" E174° 52' 20.09" northern end of Petone Wharf then;

a straight line from;

S41° 13' 38.16" E174° 52' 20.09" northern end of Petone Wharf to;

S41° 12' 57.48" E174° 52' 57.81" roundabout on Western Hutt Rd to;

S41° 11' 00.8" E174° 52' 26.6" Belmont Hill VRP to;

S41° 11' 01.45" E174° 45' 33.04" to;

S41° 09' 10.30" E174° 46' 06.87" to;

S41° 08' 56.94" E174° 49' 59.67" Y intersection of Main Rd, Raha St and Kenepuru Dr to;

S41° 08' 55.25" E174° 52' 25.86"

Vertical limits: SFC to 1500 ft

### **Draft Turakirae transit lane co-ordinates**

All that airspace bounded by a straight line from;  
S41° 22' 48.26" E174° 53' 28.72" intersection CTR boundary and Wainuiomata River to;  
S41° 24' 45.36" E174° 54' 44.50" to;  
S41° 25' 55.64" E174° 55' 30.36" then;  
the arc of a circle of 7.5 NM radius centred on S41° 20' 14" E174° 49' 01" WN DME from;  
S41° 25' 55.64" E174° 55' 30.36" clockwise to;  
S41° 27' 04.74" E174° 53' 04.95" then;  
a straight line from;  
S41° 27' 04.74" E174° 53' 04.95" to;  
S41° 24' 43.8" E174° 53' 05.6" existing NZG674 seq 2 point then;  
a line following the Wainuiomata River from:  
S41° 24' 43.8" E174° 53' 05.6" existing NZG674 seq 2 point to;  
S41° 23' 38.2" E174° 52' 56.6" existing NZG674 seq 1 point (follows the G674 boundary) then;  
a line continuing to follow the Wainuiomata River from:  
S41° 23' 38.2" E174° 52' 56.6" existing NZG674 seq 1 point to;  
S41° 22' 48.26" E174° 53' 28.72" intersection CTR boundary and Wainuiomata River.

Vertical limits: SFC to 1500 ft

### **Requested CTR Instrument Sector co-ordinates.**

All that airspace bounded by a straight line from;  
S41° 08' 59.36" E174° 52' 27.83" to;  
S41° 11' 15.68" E174° 52' 10.29" to;  
S41° 13' 25.13" E174° 52' 19.47" to;  
S41° 20' 18.69" E174° 50' 20.47" to;  
S41° 20' 29.55" E174° 50' 18.00" to;  
S41° 20' 39.69" E174° 50' 16.31" to;  
S41° 24' 41.88" E174° 50' 43.97" to;  
S41° 27' 38.49" E174° 50' 32.16" then;  
the arc of a circle of 7.5 NM radius centred on S41° 20' 14" E174° 49' 01" WN DME from;  
S41° 27' 38.49" E174° 50' 32.16" clockwise to;  
S41° 26' 08.80" E174° 42' 55.01" then;  
A straight line from;  
S41° 26' 08.80" E174° 42' 55.01" to;  
S41° 25' 48.21" E174° 43' 14.79" to;  
S41° 23' 47.94" E174° 45' 35.90" to;  
S41° 19' 17.61" E174° 46' 43.90" to;  
S41° 14' 01.12" E174° 46' 08.15" to;  
S41° 11' 42.67" E174° 45' 20.37" to;  
S41° 09' 10.30" E174° 46' 06.87" to;  
S41° 08' 56.94" E174° 49' 59.67" Y intersection of Main Rd, Raha St and Kenepuru Dr to;  
S41° 08' 55.25" E174° 52' 25.86" to;  
S41° 08' 59.36" E174° 52' 27.83"

Vertical limits: SFC to 2500 ft

Classification: Class C

ATC Authority: Wellington Tower 118.8 120.0

**Requested CTR Ward Sector co-ordinates.**

All that airspace bounded by a straight line from;

S41° 15' 40.20" E174° 55' 40.17" to;  
S41° 17' 01.42" E174° 54' 15.76" to;  
S41° 19' 08.36" E174° 50' 40.74" to;  
S41° 13' 25.13" E174° 52' 19.47" to;  
S41° 11' 15.68" E174° 52' 10.29" to;  
S41° 08' 59.36" E174° 52' 27.83" to;  
S41° 15' 40.20" E174° 55' 40.17"

Vertical limits: SFC to 2500 ft

Classification: Class C

ATC Authority: Wellington Tower 118.8 120.0

**Requested CTR East Sector co-ordinates.**

All that airspace bounded by a straight line from;

S41° 15' 40.20" E174° 55' 40.17" to;  
S41° 17' 35.11" E174° 54' 51.50" to;  
S41° 22' 02.69" E174° 52' 59.07" to;  
S41° 22' 48.26" E174° 53' 28.72" intersection CTR boundary and Wainuiomata River to;  
S41° 23' 00.21" E174° 53' 36.33" to;  
S41° 20' 12.53" E174° 50' 22.25" to;  
S41° 19' 08.36" E174° 50' 40.74" to;  
S41° 17' 01.42" E174° 54' 15.76" to;  
S41° 15' 40.20" E174° 55' 40.17"

Vertical limits: SFC to 2500 ft

Classification: Class C

ATC Authority: Wellington Tower 118.8 120.0

**Requested CTR Baring Sector co-ordinates.**

All that airspace bounded by a straight line from;

S41° 23' 00.21" E174° 53' 36.33" to;  
S41° 25' 55.64" E174° 55' 30.36" then;  
the arc of a circle of 7.5 NM radius centred on S41° 20' 14" E174° 49' 01" WN DME from;  
S41° 25' 55.64" E174° 55' 30.36" clockwise to;  
S41° 27' 38.49" E174° 50' 32.16" then;  
a straight line from;  
S41° 27' 38.49" E174° 50' 32.16" to;  
S41° 24' 41.88" E174° 50' 43.97" to;  
S41° 20' 39.69" E174° 50' 16.31" to;  
S41° 20' 18.69" E174° 50' 20.47" to;  
S41° 20' 12.53" E174° 50' 22.25" to;  
S41° 23' 00.21" E174° 53' 36.33"

Vertical limits: SFC to 2500 ft

Classification: Class C

ATC Authority: Wellington Tower 118.8 120.0

### **Requested CTR Owhiro Sector co-ordinates.**

All that airspace bounded by a straight line from;  
S41° 20' 01.55" E174° 46' 32.85" to;  
S41° 23' 47.94" E174° 45' 35.90" to;  
S41° 25' 48.21" E174° 43' 14.79" to;  
S41° 26' 08.80" E174° 42' 55.01" then;  
the arc of a circle of 7.5 NM radius centred on S41° 20' 14" E174° 49' 01" WN DME from;  
S41° 26' 08.80" E174° 42' 55.01" clockwise to;  
S41° 24' 40.65" E174° 40' 58.76" then;  
a straight line from;  
S41° 24' 40.65" E174° 40' 58.76" to;  
S41° 22' 33.61" E174° 42' 49.68" to;  
S41° 20' 01.28" E174° 46' 25.90" to;  
S41° 20' 01.55" E174° 46' 32.85"

Vertical limits: SFC to 2500 ft  
Classification: Class C  
ATC Authority: Wellington Tower 118.8 120.0

### **Requested CTR West Sector co-ordinates.**

All that airspace bounded by a straight line from;  
S41° 19' 03.02" E174° 46' 42.25" to;  
S41° 19' 17.61" E174° 46' 43.90" to;  
S41° 20' 01.55" E174° 46' 32.85" to;  
S41° 20' 01.28" E174° 46' 25.90" to;  
S41° 22' 33.61" E174° 42' 49.68" to;  
S41° 24' 40.65" E174° 40' 58.76" to;  
S41° 21' 43.8" E174° 42' 57.6" Sinclair Head VRP to;  
S41° 19' 47.37" E174° 43' 31.99" Hawkins Hill radar site to;  
S41° 17' 18.97" E174° 43' 37.55" to;  
S41° 19' 01.89" E174° 46' 13.06" to;  
S41° 19' 03.02" E174° 46' 42.25"

Vertical limits: SFC to 2500 ft  
Classification: Class C  
ATC Authority: Wellington Tower 118.8 120.0

### **Requested CTR City Sector co-ordinates.**

All that airspace bounded by a straight line from;  
S41° 11' 42.67" E174° 45' 20.37" to;  
S41° 14' 01.12" E174° 46' 08.15" to;  
S41° 19' 03.02" E174° 46' 42.25" to;  
S41° 19' 01.89" E174° 46' 13.06" to;  
S41° 17' 18.97" E174° 43' 37.55" to;  
S41° 11' 42.67" E174° 45' 20.37"

Vertical limits: SFC to 2500 ft  
Classification: Class C  
ATC Authority: Wellington Tower 118.8 120.0

**Draft CTA NZA635mod LL 1500 ft co-ordinates**

All that airspace bounded by a straight line from;  
 S41° 25' 55.64" E174° 55' 30.36" to;  
 S41° 30' 34.89" E175° 03' 28.40" then;  
 the arc of a circle of 15 NM radius centred on S41° 20' 14" E174° 49' 01" WN DME from;  
 S41° 30' 34.89" E175° 03' 28.40" clockwise to;  
 S41° 29' 27.30" E174° 33' 17.30" then a straight line from;  
 S41° 29' 27.30" E174° 33' 17.30" to;  
 S41° 24' 40.65" E174° 40' 58.76" then;  
 the arc of a circle of 7.5 NM radius centred on S41° 20' 14" E174° 49' 01" WN DME from;  
 S41° 24' 40.65" E174° 40' 58.76" anticlockwise to;  
 S41° 25' 55.64" E174° 55' 30.36"

Vertical limits: 1500 ft to 9500 ft  
 Classification: Class C  
 ATC Authority: Wellington APPROACH 122.3 119.3 121.1

**Draft CTA NZA637mod LL 2500 ft 30 November 2017 co-ordinates**

NZA637	1	Twin Bridges	410523.0S	1750551.0E	GRC				
NZA637	2		411031.3S	1750514.4E	GRC				
NZA637	3		411628.4S	1745717.5E	GRC				
NZA637	4		412445.36S	1745444.50E	GRC				
NZA637	5		412555.64S	1745530.36E	CWA	412013.6S	1744902.0	7.5 NM	
NZA637	6		412440.65S	1744058.76E	GRC				

*renumber following sequence numbers*

<del>NZA637</del>	<del>4</del>		<del>412530.5S</del>	<del>1745430.9E</del>	<del>CWA</del>	<del>412428.9S</del>	<del>1744800.6E</del>	<del>5</del>	<del>NM</del>
<del>NZA637</del>	<del>5</del>		<del>412443.9S</del>	<del>1744122.0E</del>	<del>GRC</del>				
NZA637	6		412927.3S	1743317.3E	CCA	412013.6S	1744902E	15	NM
NZA637	7		413034.9S	1750328.4E	GRC				
NZA637	8		413636.2S	1751410.1E	CWA	412013.6S	1744902.0E	25	NM
NZA637	9		414457.8S	1744400.0E	GRC				
NZA637	10	Awatere River Mouth	413624.9S	1740957.6E	GRC				
NZA637	11		413425.6S	1740854.2E	GRC				
NZA637	12	White Bluffs	413328.9S	1740849.6E	GRC				
NZA637	13		413000.0S	1740800.0E	GRC				
NZA637	14	The Diversion	412624.8S	1740145.6E	GRC				
NZA637	15	Tuamarina Bridge	412622.4S	1735754.0E	GRC				
NZA637	16	Rarangi	412330.8S	1740248.6E	GRC				
NZA637	17		412040.1S	1740741.8E	GRC				
NZA637	18		412035.5S	1741548.7E	GRC				
NZA637	19		412032.0S	1742228.3E	CWA	412013.6S	1744902E	20	NM
NZA637	20		410812.4S	1742749.5E	GRC				
NZA637	21		410511.1S	1742233.5E	CWA	412013.6S	1744902E	25	NM
NZA637	22		405535.5S	1745451.1E	GRC				
NZA637	23		410205.1S	1745601.3E	GRC				

Vertical limits: 2500 ft to 9500 ft  
 Classification: Class C  
 ATC Authority: Wellington APPROACH 122.3 119.3 121.1

**Draft CTA NZA640mod LL 4500 ft 30 November 2017 co-ordinates**

NZA640	1		411712.1S	1751605.9E	GRC				
NZA640	2		412554.9S	1751300.9E	GRC				
NZA640	3		413335.8S	1750848.1E	GRC				
<del>NZA640</del>	<del>4</del>		<del>412530.5S</del>	<del>1745430.9E</del>	<del>GRC</del>				

NZA640 4 413034.89S 1750328.40E GRC  
 NZA640 5 412555.64S 1745530.36E GRC  
 NZA640 6 412445.36S 1745444.50E GRC

*renumber following sequence numbers*

NZA640	5		411628.4S	1745717.5E	GRC				
NZA640	6		411031.3S	1750514.4E	GRC				
NZA640	7		411502.7S	1751250.1E	GRC				

Vertical limits: 4500 ft to 9500 ft

Classification: Class C

ATC Authority: Wellington APPROACH 122.3 119.3 121.1