
2018 Wellington control zone amendment
Final airspace changes

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

Introduction

The provider of air traffic services (ATS) in New Zealand, Airways Corporation of New Zealand Ltd (Airways), is progressively introducing new performance-based navigation (PBN) instrument flight procedures at controlled aerodromes as part of their PBN Implementation Plan.

In mid-December 2016, Airways submitted an application to amend the Wellington control zone (CTR) and with consequential amendments to some Wellington control areas (CTA) to contain new PBN instrument procedures. Consultation was initiated with users in January with a cut-off date of 1 March 2018 for submissions.

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

- CAA consultation document – ‘*Application for amendment to Wellington control zone and terminal control area boundaries*’ published January 2018 (<http://www.caa.govt.nz/assets/legacy/airspace/2018-Wellington-CTR-Consultation.pdf>); and
- Airways’ petition – (<http://www.caa.govt.nz/assets/legacy/airspace/WN-CTR-CTA-Petition-Definitions.pdf>)

There was short delay in scheduling a consultation meeting with airspace users, and the meeting was held on 1 March 2018 at the CAA offices. Due to the delay, the submission cut-off date was extended to 8 March 2018.

Overview of submissions

A total of nine submissions were received users of which none were opposed to the changes. Several submissions did include suggested additional changes to those already proposed.

One submitter was concerned that there had been very little consultation by Airways in regard to the introduction of new PBN procedures, and the changes needed to existing VFR arrival and departure procedures as it could have a significant effect on their operations.

A helicopter operator requested that the current Queen’s Wharf heliport procedures be retained due to the severe impact any additional limitations would have on their operations.

CAA will continue to ensure that the appropriate consultation is undertaken between the air traffic services provider and the affected VFR operators. CAA does not wish to see an unreasonable outcome and will apply efforts to avoid this.

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 E¹.

- 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 (ATC) service for all aerodrome traffic.

Note — the term ‘controlled aerodrome’ indicates that ATC 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.

¹ CAR 71.51(a), ICAO Annex 11, Doc 4444

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 –

- 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 Wellington aerodrome. An approach control surveillance service is provided by Wellington approach sector within controlled airspace within approximately 50 NM radius of Wellington aerodrome.

Wellington Tower is certificated to provide aerodrome control services only.

The CTR and CTA in the Wellington airspace is Class C airspace. Within Class C airspace, the air traffic service is provided to IFR and VFR aircraft is shown in Table 1 below:

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

Type of flight	Separation provided	Service provided	ATC clearance required
Special VFR	IFR from special VFR Special VFR from special VFR when flight visibility < 5000 m	Air traffic control service, and traffic information (and traffic avoidance advice on request) between special VFR flights when flight visibility ≥ 5000 m	Yes

Table 1 – air traffic service provision in Class C airspace

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

1. Wellington control zone

There were no submissions received opposing the proposed boundary changes. Several submitters requested additional airspace to be designated within the amended Wellington CTR/C. These requests are discussed below.

One submission requested that the western boundary of proposed CTR be moved to the east of Hawkins Hill, as detailed in Airways' petition on page 13, to facilitate hang glider/paraglider operations north of the coast from Sinclair Head. Following the user consultation meeting, it was additionally proposed that the CTR boundary between Sinclair Head and Owhiro Bay be amended to follow a line parallel with the coast, 100 m out to sea.

CAA comment: *Airspace descriptions based on geographical feature use a definitive feature. In the instance of coastlines, the mean high water mark as the descriptor to account for tidal changes.*

The western boundary of the amended CTR is just outside 3 NM from Wellington airport. Refer to Figure 1, page 8, showing the 3 NM radius from Wellington airport depicted in red, and the requested boundary change in pink. While noise abatement requirements has placed the aerodrome circuit for both runways to the east, over the harbour, there are still aircraft operations over the city.

Minimum VFR operating heights in the noise abatement area over the city are either 1500 ft AMSL or at least 1000 ft AGL, whichever is higher, north of a line from Owhiro Bay to Upper Makara.

While Airways stated that it would be that this boundary change would not affect instrument procedures, the final design did not incorporate this change due to concerns of the effect on VFR operations. Additionally, "... 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 off Runway 16."

The named instrument sector, as would be shown on VNCs, depicts the area around straight-in approaches, and straight ahead departures and missed approaches. Because the turning SIDs use significantly wider instrument sectors, new runway dependent Owhiro, City, Ward and Baring sectors have been designed to provide required instrument sector protection for the turning departures i.e. these sectors are instrument sectors.

Aircraft operating outside an instrument sector are separated from aircraft inside an instrument sector.

It is because of this that the VFR arrival and departure procedures have been amended to become runway dependent e.g. Runway 16 in use, VFR arrivals from the west are to enter through the new City sector to be separated from IFR departures to the south-west on the MESSEL SID. Refer to Airways' petition, page 6, Diagram 6 for further details.

As shown on this diagram, the, Owhiro Bay is within the final boundary line of the Owhiro sector.

This requested change was opposed in the submission from the aerodrome operator – Wellington International Airport Ltd (WIAL), primarily due to effect on VFR operations which frequently use this airspace when arriving or departing from Wellington aerodrome and the heliports within the control zone, as well as the potential for RPAS operations between Sinclair Head and Owhiro Bay south of the coastline. WIAL also provided data about local wind conditions which indicate that the area would be rarely used.

CAA has reviewed this request. Based on the technical data above, CAA is not satisfied that amending the boundary as requested would provide adequate containment for the Runway 16 turning departures to the south-west.

The proposed boundary changes to Wellington CTR/C will proceed as requested by Airways.

a) VFR transit lanes

(i) Amended Porirua VFR transit lane

There were no submissions received in relation to the northern VFR transit lane.

Amended VFR transit lane, Porirua, will be designated as requested.

(ii) New VFR transit lane – Turakirae

There were no objections received to the proposed VFR transit lane at Turakirae Head, surface to 1500 ft.

Two submissions, Wellington Hang Gliding and Paragliding Club (WHGPC), supported by the New Zealand Hang Gliding and Paragliding Association (NZHGPA), requested a boundary amendment to facilitate hang gliding and paragliding operations at Baring Head general aviation area (GAA).

At present the boundary of Wellington CTR follows the Wainuiomata River and then eastwards along the coastline. This has enabled hang gliders/paragliders to get airborne within the Baring Head GAA, cross the CTR boundary and climb eastwards underneath controlled airspace towards Palliser Bay. The new CTR boundary is inland of the coast, thus meaning Baring Head GAA is now surrounded by the CTR.

The upper limit of the proposed new VFR transit lane upper limit may not be sufficient to allow hang gliders/paragliders to obtain enough height for cross country flights. WHGPC has made two requests to enable hang gliders/paragliders operate at higher heights in this area – a new GAA over the VFR transit lane (detailed below), or to extend Turakirae VFR transit lane to include Baring Head GAA and above.

(iii) Requested western VFR transit lane

One submission requested the designation of a further VFR transit lane to the west from Queen's Wharf to Mount Victoria, Island Bay, northwards of the coastline to Sinclair Head, Hawkins Hill, Windmill VRP to Queen's Wharf.

CAA comment: *The eastern portion of the requested VFR transit lane would be within the instrument sector.*

Redesigning the eastern boundary to outside the instrument sector would also require a 1 NM buffer from the instrument sector boundary for visual fix error, as there is no suitable significant geographical feature. The result would leave a very narrow area which would not be practicable to use.

This request will not be progressed for the above reasons.

(iv) Requested Wellington-Petone motorway VFR transit lane

One submission requested a low-level VFR transit lane overhead SH1 and SH2 between Wellington city and Petone.

CAA comment: *This location would pass directly underneath the ILS final approach path, and would not be separated from aircraft on the ILS approach as required in rule 71.57.*

This request will not be progressed for the above reasons.

(v) Requested eastern harbour coast VFR transit lane

Two submitters requested the extension of the northern transit lane southwards along the eastern harbour coastline. One was to Pencarrow VRP and the other was to link up with the new Turakirae VFR transit lane.

Refer to Figure 1. The area outlined in black would be the section joining the new northern VFR transit lane and the new Turakirae VFR transit lane.

CAA comment: *The aerodrome traffic circuit at Wellington is wider and higher than normally used because of noise abatement requirements. Aircraft are required to maintain at least 0.5 NM from the Miramar peninsula and the circuit height is 1500 ft*

(93.107(a)(2)). This places traffic in the downwind leg just under 2 NM from Wellington airport. The narrowest distance across the harbour is approximately 1 NM from Point Dorset to the eastern foreshore.

To ensure that circuit traffic, i.e. aircraft receiving an aerodrome control service, does not conflict with uncontrolled aircraft, a radius of 3 NM from Wellington airport depicts a notional circuit area. The red circle in Figure 1 depicts the 3 NM radius from Wellington, and as shown, the requested VFR transit lane extends into this area.

Potentially an aircraft downwind at 1500 ft could be operating alongside an uncontrolled aircraft at a lateral distance of approximately 0.5 NM. This situation is exacerbated if an aircraft in the circuit is required to hold at the harbour entrance or in a position downwind.

Visual observation of aerodrome traffic by ATC at 1500 ft downwind is constrained with distance, owing to the elevation of the aerodrome control tower versus the Miramar peninsula on the eastern side of the runway.

This request will not be progressed for the above reasons.

2. Wellington control areas

There was one submission received which supported the consequential changes to the Wellington CTA/C to align with amended CTR/C boundaries. No other submissions were made in regard to CTA boundaries.

As proposed, the amendments to Wellington CTAs to align with new control zone boundaries will be made.

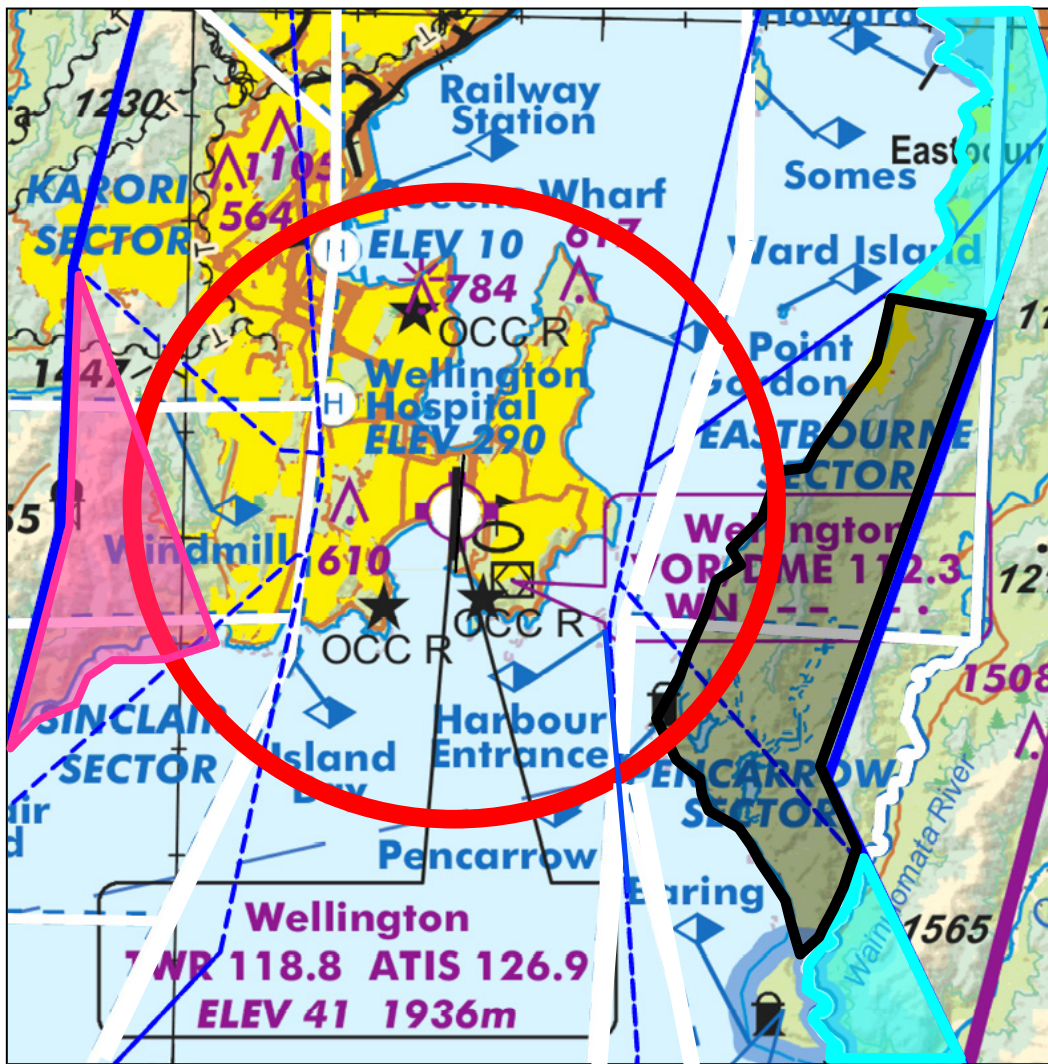


Figure 1 – requested western boundary change and new eastern VFR transit lane

Other airspace changes

1. Visual reporting points

Airways has requested the designation of four new visual reporting points (VRPs) and for two VRPs to be disestablished (refer to pages 15-16 of Airways' petition).

There are minor issues with two of the proposed VRPs as explained in sections a) and b) below.

a) New Golf course VRP

At the user consultation meeting suitability of the Berhampore golf course as a VRP was discussed, as it differs from most golf courses in that it is not a flat area but on hillsides in a valley. Subsequently, a couple of days later, an item appeared in the Dominion Post newspaper about a Wellington City Council proposal to halve the size of the golf course and use the land for other purposes.

Based on those two factors which call into question the suitability of the location as a VRP, but primarily because of the potential difficulty of locating and sighting the golf course, Airways now wishes to withdraw the request for a VRP at 'Golf Course'.

An alternative location was suggested at the nearby National Hockey Stadium in Berhampore. The artificial turf used as the all-weather surfaces on the hockey fields is distinctive from the surrounding natural bush and park areas, making it readily identifiable from the air.

Airways checked the location of the hockey grounds, but it is within the planned instrument sector and therefore is not usable for separation purposes.

b) New Makara Peak VRP

At present there is a VRP at Makara Beach on the western boundary of the existing Wellington CTR. A concern has been raised that confusion could arise between the two VRPs with similar names.

With the new Wellington CTR, a VRP at Makara Beach will not be required. The settlement is already named on the visual navigation charts, so disestablishment of Makara Beach VRP will have very little effect on air traffic management.

Makara Beach VRP will be disestablished.

c) New Observatory VRP

New PBN SIDs will become effective on 24 May 2018. As part of new VFR arrival and departure procedures replacing the existing procedures which would not provide separation from the new SIDs, Airways requested the new VRP Observatory be designated early and become effective on 24 May 2018 also.

New VRP Observatory has been designated and will be effective on Thursday 24 May 2018.

The following new VRPs will be designated effective from 8 November 2018:

- Grenada (S 41 10 56.9, E 174 50 08.6)
- Makara Peak (S 41 17 20.4, E 174 42 25.0)

The following VRPs will be disestablished on 8 November 2018:

- Tawa College
- Makara Beach
- Kaukau
- Railway Station

Because proposed VRP Golf Course will not be designated, existing Windmill VRP will not be disestablished as per Airways' request.

2. General aviation areas

a) Baring Head GAA

As stated earlier, the boundary of the new CTR between Baring and Turakirae heads would be moved inland which will have a negative impact on hang gliding and paragliding operations to and from Baring Head GAA.

At the user consultation meeting, WHGPC initial request for a new Orongorongo GAA over the Turakirae VFR transit lane from 1500 ft to 2000 ft was discussed. Airways explained the reasons why this would not be separated from the new Runway 16 standard instrument departure (SID) which climbs to the south-east.

In the second submission from WHGPC, the club requests that either NZG674 Baring Head be incorporated into the new Turakirae VFR transit lane, or the upper limit of NZG674 be raised from 600 ft to 1000 ft.

These requests have been assessed by Airways and the certificated instrument procedure design organisation, Aeropath. This assessment has indicated that extending the Turakirae VFR transit lane would not meet separation requirements from the SID to the south-east, but it may be possible to raise the upper limit of NZG674. A full assessment on this is expected early May.

Subject to the full assessment confirming required separation is met, the upper limit of NZG674 will be raised to 1000 ft.

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 their comment and consideration.

Aerodrome operators (charted aerodromes/heliports shown on VNC C2, lower North Island only)

- Avalon heliport (TVNZ Avalon Studios Ltd)
- Kenepuru Hospital heliport (Capital and Coast District Health Board)
- Paraparamu aerodrome (Kapiti Districts Holding Ltd)
- Queens Wharf heliport (Wellington Helicopters)
- Wellington aerodrome (Wellington International Airport Ltd)
- Wellington Hospital heliport (Capital and Coast District Health Board)

Operators, Organisations and User Groups

- Air2There
- Air Freight NZ Ltd (Life Flight)
- Air New Zealand Group – includes Mount Cook and Air Nelson
- Aircraft Owners and Pilots Association
- Airways Corporation of New Zealand
- Airwork Flight Operations
- Aviation New Zealand
- Balloon Association of New Zealand
- Gliding New Zealand
- Hood User Group
- Jet Connect
- Jetstar Airways Ltd
- Jetstar Regional
- Kapiti Districts Aero Club
- Massey School of Aviation
- Model Flying New Zealand
- New Zealand Agricultural Aviation Association
- New Zealand Airline Pilots Association
- New Zealand Army
- 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
- Qantas Airways Ltd
- Recreational Aircraft Association of New Zealand
- Royal New Zealand Air Force
- Soundsair
- Sport Aircraft Association New Zealand
- Sport Aviation Corp
- UAV New Zealand
- Virgin Australia
- Wellington Aero Club
- Wellington Helicopters

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, 5 and 6.

If there are any further questions regarding the review process, please contact CAA – 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:

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Reference – 2018 Wellington control zone amendment – final airspace changes

Closing date for final submissions is **Monday 7 May 2018**.

Further information

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