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In, Out and Around Taupo

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In, Out and Around Taupo

This article is aimed mainly at the VFR pilot who has not previously flown in the Taupo area, or who visits Taupo only occasionally. As we have suggested in past articles, and GAP booklets in the "In, Out and Around" series, diligent pre-planning will avoid a great deal of difficulty when flying to a new or infrequently visited destination. Taupo, while being a great place to visit (or live), presents some unique challenges to the itinerant pilot. These include:

- A high level and wide range of aircraft activity, including helicopters, gliders, and VFR and IFR aeroplanes;
- In suitable weather, virtually continuous parachuting during daylight hours, with a Parachute Landing Area (PLA) on the aerodrome;
- A 2-stage Mandatory Broadcast Zone (MBZ);
- Two nearby Low Flying Zones, a Special Procedures Area (SPA) adjoining the MBZ, a danger area within the SPA; and
- Several other aircraft operating sites in the vicinity (water aerodrome, helipads, glider airstrip).

All of this information is available in *AIP New Zealand* and the relevant Visual Navigation Charts (VNC). The 1:250 000 VNCs 13 and 14 depict the MBZ, SPA, danger area, and the various visual reporting points. Note especially the boxed caption on the *AIP New Zealand* aerodrome chart for Taupo: "**Taupo aerodrome is NZ's busiest parachute drop zone – be alert**". Please take the time to study all references well in advance of your intended trip, and, if there is still something you are not sure of, contact Taupo UNICOM*, or one or more of the local operators for advice.

Getting There

Arriving at Taupo is generally a straightforward exercise in good weather, especially if arriving from the west or south, when the lake will provide good reference. One important thing to remember is that the lake is 1172 feet above sea level, so make due allowance when selecting your flight altitude(s). If you find yourself inadvertently flying in marginal weather along the lake shoreline, be aware that the elevation of Taupo Aerodrome is 1335 feet, that is, another 163 feet above lake level.

Approach Taupo from just about any direction, and dominating the skyline you will see Mt Tauhara (3569 ft), some 4 NM to the northeast of the aerodrome.

Note that the lack of good visual features to the east of Taupo can make accurate position reporting difficult, and, with the slope of the terrain over the last 10 to 15 miles, you can find yourself unexpectedly close to Taupo without having made any preliminary radio calls. This can be a problem with arrivals from the east, as the MBZ boundary is just one mile east of the aerodrome. Additionally, parachute drop aircraft normally descend to the east of the circuit area.

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Mt Tauhara is visible from a considerable distance in good weather. This is a view from Mangakino, with Whakamaru Dam visible to the right of centre, and Mt Tauhara on the skyline.

*For a refresher, see *Vector* article May/June 2005, "MBZs, SPAs, and UNICOM".

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Another view from the Napier–Taupo Road, about 12 NM southeast of Taupo.

Airspace

A two-stage MBZ (B473) is established in the Taupo area – the lower portion extends from the surface to 6500 feet amsl and is partially surrounded by a wider segment from 3000 to 6500 feet amsl. They share a common eastern boundary, part of which is an easily discerned powerline running to the south from Wairakei. The MBZ boundary diverges from the powerline where it makes a turn just east of Taupo Aerodrome. Refer to *AIP New Zealand* page NZAP AD 2 – 31.1 for operating procedures within the Taupo MBZ, but note that joining and transiting traffic is expected to broadcast position relative to a published reporting point. The maximum interval between reports is 10 minutes (shown in each MBZ information box on the VNCs). Ensure that you have identified all the local visual reporting points during your pre-trip planning.

Note: The MBZ is transponder-mandatory above 3000 feet, but we strongly recommend that you have your transponder on Mode C (altitude reporting) at all times in flight within the MBZ. A number of aircraft operating in and out of Taupo are ACAS-equipped, and transponder operation will assist these aircraft with traffic information.

Itinerant IFR pilots should carry, in addition to their normal IFR charts, at least one of the VNCs depicting the visual reporting points in the Taupo area, otherwise the position reports of other traffic may be meaningless or confusing. Your own reports (once you are visual) should relate to these reporting points as per the MBZ operating procedure. A pearl of wisdom for IFR pilots – note the direction of the final approach for the Taupo NDB Alfa approach, and that the missed approach point is the NDB. Think about the implications if the NDB goes off the air while you are on final. (How would you detect the NDB failure, and if you didn't, where would you end up? What back-up navaids do you have?)

To the northeast of the lower portion of the MBZ lies Centennial Park SPA – Centennial Park is an easily identifiable racecourse, with an airstrip along its northern edge. This airstrip is the home base for Taupo Gliding Club, and considerable gliding activity can be expected in the vicinity. In good soaring weather, this activity will not necessarily be confined to the SPA – gliders can be operating anywhere in the local area, and may (with clearance) operate up to 9500 feet. Centennial Park is a private airfield, but it is available for use with the prior permission of the Gliding Club. Model aircraft flying also takes place at Centennial Park – this is the basis for the danger area (D426) depicted on the VNC.

The two main boundaries of the SPA comprise two powerlines, one of which also forms part of the eastern boundary of the MBZ; the second, also originating from Wairakei, curves southward to pass to the east of Mt Tauhara. From where this line crosses the saddle on the eastern side of Mt Tauhara, take a straight line to the summit, then another to the point where the MBZ boundary line crosses the Napier road.

Above the MBZ is controlled airspace: Auckland CTA/D, 6500 to 9500 feet, and Auckland CTA/C, 9500 feet to FL 600. Traffic departing Taupo to the northeast should also be aware of the Rotorua CTA/D step, lower limit 4500 feet, only 14 NM from Taupo. As with all controlled airspace, clearance is required prior to entry.

On the aerodrome chart are depicted Eastern and Western helicopter arrival

Wairakei reporting point (powerhouse) in foreground, with powerline forming the common boundary between the MBZ and the Centennial Park SPA.

and departure areas, as well as a parachute drop area. Helicopters arriving and departing via the helicopter areas will not be above 600 feet agl in the circuit area, and may be seen lower in the Low Flying Zone (L460) immediately east of the aerodrome.

Approaching Taupo

En route, listen to the Taupo AWIB (aerodrome and weather information broadcast, 125.2 MHz) as early as reception will permit. AWIB will also advise whether parachuting is in progress. Before arriving at the MBZ boundary, it is a good practice to listen out on the MBZ frequency (118.4 MHz) to gauge the traffic intensity and to gain an appreciation of where the traffic might be. At or just outside the MBZ boundary, make your initial call, stating position, altitude and intentions, with an (as accurate as possible) ETA. When arriving from the south, for example, a typical call might be, "Taupo traffic, X-ray Yankee Zulu Mission Bay three thousand five hundred, Taupo at five two". Approaching from the east, an earlier call is desirable, given the proximity of the eastern boundary of the MBZ to the aerodrome.

A reminder: UNICOM is not AFIS (aerodrome flight information service) and does not provide traffic information, nor a SAR alerting service, nor a flight plan termination facility. A UNICOM may relay reports on aircraft movements.

With the intensive parachuting activity at Taupo, an overhead join is not recommended. If Runway 35 were in use in our example, joining long final would be a sensible option, transmitting your intentions prior to joining and once established. If Runway 17 is in use, join downwind right-hand. If the crosswind on 17/35 is a problem, 11/29 is available, but exercise extreme caution if parachuting is in progress.

A good lookout must be maintained at all times in the Taupo area. Ensure that your landing lights are on at all times while in the MBZ – they make you far more conspicuous to other traffic. Even though CAR 91.135 *Mandatory broadcast zones* requires pilots to "activate, if equipped, the aircraft's landing lights **or** anti-collision lights", normal practice is to have the anti-collision light(s) on continuously while airborne anyway, **and** the landing lights on in addition.

Parachuting

On a normal operating day, there can be up to four parachute drop aircraft airborne at any one time, and this equates to a total of about 30 parachutes. Most of this activity is tandem jumping, so the parachutes are under the control of professional jumpmasters.

Normal drop altitude is 13,000 feet (amsl), and a drop run can take up to three minutes to complete. Drop aircraft will broadcast on the MBZ frequency before any parachutists leave the aircraft. For the parachutists, there is approximately 45 seconds of free fall, with canopies starting to open at about 5000 feet and fully open by about 4000 feet. This gives around five minutes of flight under the canopy.

Once the parachutists are clear, the drop aircraft will descend rapidly (typically 3000 ft/min) on the eastern side of the aerodrome, joining the circuit from there. Steep approaches are not uncommon, so your lookout needs to take account of this. The drop aircraft may actually land before the parachutists.

Parachutists are dropped upwind of the aerodrome, so be aware of not only the surface wind, but also the upper winds. The usual target area for parachute landing is the grass runway (11/29), which is normally used only for this purpose (except when crosswind on 17/35 is excessive). In an easterly wind, parachutists will aim to cross Runway 17/35 at a minimum height of 1500 feet agl, and if they cannot comply with this, they will land to the east of the aerodrome.

A free-falling parachutist can be extremely difficult to see, so diligent monitoring of the MBZ frequency is essential in order to become 'situationally aware' – otherwise you can be flying along quite happily with no traffic in sight, and suddenly half a dozen parachute canopies in assorted colours materialise in front of you. Disconcerting if you are not expecting it!

Because of the parachuting activity, transiting aircraft should remain well clear of the aerodrome area (we recommend a 3-mile margin). Passing the aerodrome on the downwind side should ensure avoidance of any parachuting activity. If required, controlled VFR is available above 6500 feet in the CTA/D.

Additionally, aircraft departing from Runway 17 should maintain runway heading at least to the southern boundary, as an early right turn would infringe the parachute landing area. Similarly, an aircraft carrying out an overshoot should not climb above 1000 feet agl before the southern boundary, as in easterly wind conditions, parachutists could be crossing the runway at 1500 feet agl.

Off-Aerodrome Operating Sites

In addition to Centennial Park and its associated operations, there are some other sites you should be aware of.

Huka Falls helipad is located between the Waikato River and Highway 1, some 600 m north of the Falls themselves. A non-flying Mi-8 helicopter near the helipad is a good identifier. Not only will there be traffic operating from the helipad, but also Taupo-based sightseeing aircraft will often be flying over the area (also the Craters of the Moon thermal area, 1 NM west of the Falls), generally below 2500 feet. Located some 500 m south of the Falls is the renowned Huka Lodge, where occasional helicopter passenger drop-offs and pickups occur.

Closer to the aerodrome, Taupo Hospital helipad is located 2.5 NM north of the aerodrome reference point, on the extended centreline of Runway 17/35.

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This is used infrequently, and only for ambulance or medevac flights.

Floatplane activity can be expected from time to time on the lake, from Taupo Water aerodrome, about 1 NM to the west. During summer, boat-towed parasailing can take place in the same area. Additionally, helicopter flights to and from a pontoon near the boat harbour (where the Waikato River flows from the lake) may be expected in suitable weather.

Arriving from and departing via the southern end of Lake Taupo will take you over or close to Turangi Aerodrome. Normal unattended aerodrome considerations and procedures apply.

Weather

Taupo Aerodrome experiences considerable orographic sheltering because of the extensive high country surrounding the lake. Good flying conditions can be experienced in the local area, while surrounding areas are affected by low cloud. In most directions, the surrounding terrain is higher than Taupo, and sufficient clearance between cloud and ground can become a problem. This can be a subtle trap for arriving traffic, as the aerodrome forecast (TAF), routine reports (METAR), and the AWIB can indicate that the weather at Taupo is suitable, but this is not necessarily the case en route.

For departures, the rising terrain in most directions can cause similar problems. Following the Waikato River downstream is a possible option, except in moist northerly conditions, when the valley may fill with low stratus and associated drizzle. If in any doubt as to the suitability of the weather for departure, seek the advice of the local operators. Alternatively, stay another day, or however long it takes!

Wind directions at the aerodrome are westerly 23 percent of the time and southwesterly 16 percent. Calm conditions are experienced for about 19 percent of the time. Turbulence is generally associated with flows between east and southwest, because of the nearby mountain ranges.

In a westerly, wind funnelling up the gully just to the north of the runway (shown on the aerodrome chart) can give a sudden unexpected updraught on short final for 17 (as if you didn't have enough on your hands with the crosswind).

A gap in the weather – tempted to have a go?

Not likely – the cloudbase is at ground level on the other side of the aerodrome.

Fog is experienced on about 18 days per year, and in clear anticyclonic conditions in winter, severe frosts can occur. Check the GAP booklet *Winter Flying* to refresh your knowledge of precautions regarding frost deposits on aircraft left in the open.

A tip: all those fumaroles, thermal power stations and other steam-emitting industries provide continuous wind information. In the event of an engine failure, this awareness could save you valuable seconds.

Seeing Taupo from the Air

Commercial sightseeing activity can be very intense, and local operators generally have set routes and heights. Should you wish to do some local private sightseeing, it would be beneficial to visit one or more of the local operators, explain your intentions, and ask how you can fit it with the general traffic flow. Such an approach is usually appreciated, and the operators will do their best to help you. They may even advise you on the best scenic attractions to visit.

It's Worth the Effort

As stated at the beginning, good planning is paramount. Diligence in your pre-trip preparation will enable you to operate confidently in the Taupo area. If there is some aspect on which you are still unsure, contact Taupo UNICOM by telephone on 0–7–378 1784 or by email: unicom@taupoairport.co.nz.
Local operators can also offer advice.

A properly prepared pilot should enjoy a scenic and educational visit. ■