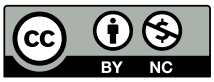
Australian Government
Civil Aviation Safety Authority



Stay OnTrack:

FLYING THE TOWNSVILLE & CAIRNS REGIONS

Procedures
Ground operations
Hotspots
Radio frequencies
Tracking points



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This guide is an aid for VFR pilots to use when flying into, out of and around the Cairns/Townsville regions. It is designed to help you in planning and conducting your flight.

The guide was developed with the assistance of operators in the Cairns/Townsville regions.

For comments and suggestions on improving this guide, contact CASA Safety Promotion at **safety.promotion@casa.gov.au**

Disclaimer: This information has been prepared for educational purposes only and was correct at the time of publishing. Always check ERSA, NOTAMs and weather before you fly.

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Contents

Cairns procedures overview

Cairns, in far north Queensland, is a Class C airfield surrounded by Class C airspace. File a flight plan and get your clearance call to ATC well in advance or remain clear of the Class C boundaries as shown on the Cairns VTC, allowing for wind drift and track tolerances.

In Cairns you share the airspace with a variety of traffic, including medical transport, regional domestic and international air transport, scenic flights and parachute operations. Helicopters routinely fly low level up the coast to Port Douglas and there are often other helicopters and fixed-wing aircraft on scenic flights up and down the coast, as well as to and from the reef. Near Wangetti, watch out for hang-gliders, which frequent the escarpment north to the Mowbray River up to 3,000 ft AMSL and over the coast. Significant helicopter, microlight and hang-glider activity occurs in the Port Douglas area in Class G airspace.

To the south, expect parachute operations in Danger Area 762, just to the north of Gordonvale. If parachutists are operating, you will frequently be given a clearance via the eastern VFR corridor when leaving Cairns, so plan ahead. If you are approaching from the south and there are parachutists in the area, you are likely to be cleared via the western VFR corridor, to remain a mile west of D762 as you pass. Jump aircraft broadcast on frequency 126.1.

For safety reasons, there has been a recent change to separation standards and responsibilities between IFR arrivals and VFR traffic using the western VFR corridor. While the western VFR corridor is still available, ATC advises VFR pilots seeking clearance there may be delays in issuing a clearance due to traffic or weather.

ATC recommends you submit a flight plan which will enable controllers to quickly identify you and issue a clearance. If you call for a clearance without having lodged a flight plan, it could lead to delays if ATC are busy. If you are operating VFR in the Cairns area, be aware there are blank spots for radar identification due to terrain shielding.

If you get clearance via a place name with which you are unfamiliar, advise ATC so they can provide a bearing and distance from another significant point, or switch to the closest useable point on the VTC. If you are uncertain of your position or cannot maintain your track or level for any reason, advise ATC immediately. Green Hill is a commonly referred to place name when approaching from the south using runway 33.

High volume helicopter and fixed-wing traffic operate over an area of the Great Barrier Reef 18 nm north-east of Cairns airport. This encompasses Green Island, Arlington Reef, Hastings Reef and Upolu Cay. Although aircraft operate on various tracks, the general traffic flow is anticlockwise. There are specific entry and exit gates, plus fixed-wing and rotary-wing tracks. Pilots should read the Special Procedures section in ERSA prior to flights in that area.

Be aware of the environmental protection RA3 Restricted Area, R766, surrounding Michaelmas Cay from SFC to 3,000 ft, active H24.

For circuit operations at Cairns, RWY 15 is left-hand circuits and RWY 33 is right-hand circuits to avoid the high terrain to the immediate west.

Be mindful that there is a marked Broadcast Area, (the Marlin broadcast area as per the Designated Airspace Handbook), in the close vicinity of Cairns, SFC to BCTA (base of controlled airspace).

Caution: Cairns Airport bird and bat activity

Bird hazard exists, consult ERSA and NOTAMs. Expect the specified species in the following months:

JAN-APR – Magpie geese, pied imperial pigeons and lapwing.

MAY-SEP – Black kites, white-faced heron, ibis, intermediate and cattle egret, beach-stone curlew, bush stone curlew and lapwing.

OCT-DEC – Pied imperial pigeons, white-faced heron, ibis, egret and lapwing.

Be aware of increased bird activity during and after rainfall.

Significant bat hazard exists at any time of the year. Peak times for flying fox activity Cairns is dusk and dawn. Specific NOTAMs will be issued during periods of increased activity.

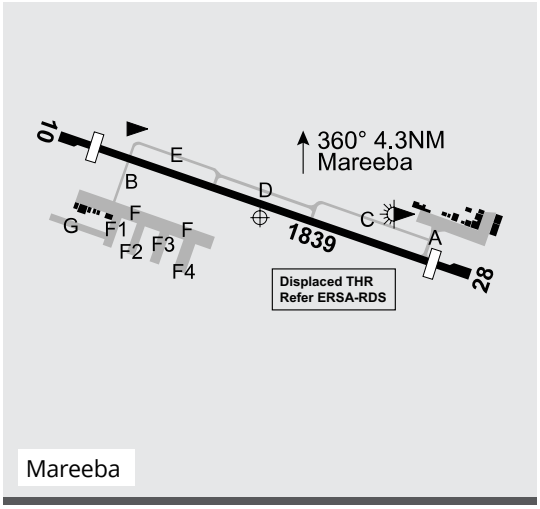
Cairns looking towards Double Island

Mareeba and Atherton procedures overview

Mareeba

Mareeba aerodrome is in Class G airspace on the Atherton Plateau, about 22 nm west-south-west of Cairns Airport (approx. 17 nm from the Cairns Control Zone boundary) and has an elevation of 1,564 ft. Ultralight flying activities take place at the aerodrome and within 3 nm; most ultralight flying happens at Jacques Coffee, about 6 nm NE.

Agricultural flying activities take place at the aerodrome and within 10 nm. Manned balloon activity may occur in the 3 hours following first light. It is the pilot-in-command's responsibility to check current charts, ERSA and NOTAMS for flights in this area.



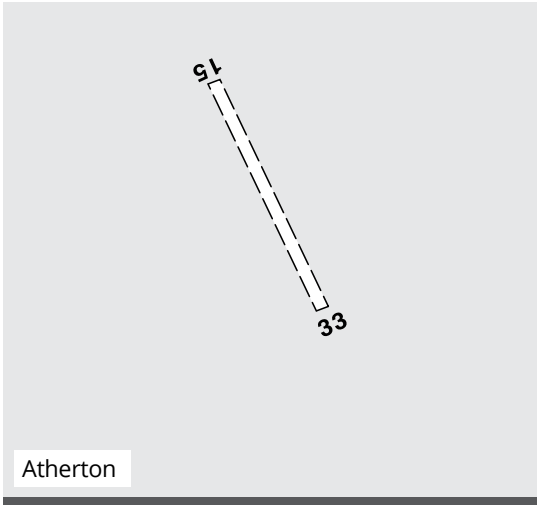
Mareeba

Atherton

Atherton aerodrome is in Class G airspace on the Atherton Plateau, located 13 nm south-south-east of Mareeba and 26 nm to the south-south-west of Cairns. Elevation is 2,460 ft.

GA fixed- and rotary-wing and RAAus aircraft regularly use the airfield. See and avoid as well as correct radio use is of critical importance in this area. Runway surface is grass, with runways 15/33. Ultralight operations operate from unmarked airstrips within 5 nm of Atherton.

During wet weather, the runway surface may become soft. The runway is undulating, and the opposite thresholds are not visible when lining up. It is the pilot-in-command's responsibility to check current charts and NOTAMS for flights in this area.



Atherton

Townsville procedures overview

Townsville Airport hosts a wide variety of civil and military aviation users, including medical transport, regional air transport, parachuting, scenic tours and military fast jets. Townsville ATC (RAAF 452 Squadron) provides a Class C service to all traffic operating within their airspace and is surrounded by Class G airspace below the CTA steps.

Townsville ATC hours are from 0600 local time to 2200 daily. It is imperative NOTAMS are checked as hours of operation may change.

There are several Special Use Airspace (SUA) Restricted Areas, designated as RA2, in the Townsville area, activated by NOTAM, except for R768A. These are:

- R747 (SFC-NOTAM) surrounding Rattlesnake Island to the north-north-west of Townsville.
- R732 Greenvale area (SFC-NOTAM), R736 (SFC-NOTAM), R737A to D (7,000-NOTAM), R739 (SFC-NOTAM), R751 (SFC-NOTAM), R752 (SFC-NOTAM), surrounding Townsville to the west.
- To the south of Townsville is R768A (SFC-2,000), activated daily 2100–1200 UTC excluding public holidays or as amended by NOTAM, and R768B (2,000-3,000) which is activated by NOTAM.
- To the north-east of Townsville R743 (4,000-FL240).

Townsville has 2 danger areas that are used extensively for flight training. D779 (Cape Cleveland training area) is used extensively by day and night below 2,500 ft AMSL. When operating in or near this danger area, pilots should monitor and broadcast their intentions on frequency 126.05.

D764 (Bluewater training area), SFC-2,500, is also used by day SFC-4,000 ft AMSL, for which a clearance is required. For this danger area, pilots must monitor frequency 126.8. When transiting between Class C and G airspace, they should also monitor frequency 126.7 to ensure situational awareness of operations in the danger area.

To reduce delays, aircraft intending to operate within Townsville Class C airspace should submit a flight plan. For both inbound and outbound flights, aircraft should contact Townsville Delivery on 128.1 for clearance. VFR aircraft should expect tracking via the published VFR routes or the coastline.

Civilian helicopters will generally depart and arrive from Pad Foxtrot which is the marked helipad at the intersection of Taxiways A4 and F. Helicopters arriving from the western side of RWY 01/19 may initially be instructed to land on RWY 07, then given an air transit to Pad Foxtrot behind arriving or departing traffic on RWY 01/19.

If you get clearance via a place name with which you are unfamiliar, advise ATC so they can provide a bearing and distance from another significant point, or switch to the closest useable point on the VTC. If you are uncertain of your position or cannot maintain your track or level for any reason, advise ATC immediately.

Caution: Townsville Airport bird activity

Bird and animal hazard exists up to 3,000 ft, with high risk during the DEC to MAY seasonal period during dawn and dusk. Consult current ERSA and NOTAMs. Expect the following species in the following months:

DEC-MAR – Magpie geese, various duck species in proximity to RWY strip especially after any rain.

FEB-MAY – Black kites are present all year round but expect higher numbers during this time, and when mowing occurs.

AUG-DEC – Flying foxes are present all year round but are at peak risk during this period.

DEC-MAY – Nankeen kestrels are present in higher numbers during this period.

Bush-stone curlews pose a strike risk on the ground during night hours.

Be aware of increased bird activity during and after rainfall, Specific NOTAMs will be issued during periods of increased activity.

Bluewater Park, Donnington Airpark and Starke Field procedures overview

Bluewater Park

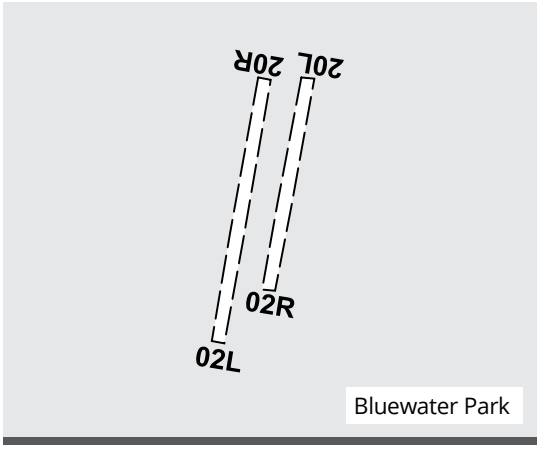
Bluewater Park is an uncertified aerodrome in Class G airspace, within danger area D764, about 16 nm west-north-west of Townsville Airport. Prior permission is required from the operator. Elevation is 110 ft. Helicopter and ultralight flying activities take place at the aerodrome, as well as model aircraft flying within a 500-metre radius of the aerodrome.

Be mindful that D764 can be used for military operations, controlled and monitored by Townsville Approach. There are several local traffic regulations, with pilots advised to consult ERSA prior to any flights to the aerodrome.

Pilots are reminded when flying at this location to fly neighbourly and avoid overflying nearby isolated homes, maintain a tight circuit to the east, avoiding residential areas. The dead side of the circuit is always west. It is preferred to join upwind at 1,600 ft. A full NOTAM service is not available.

It is the pilot-in-command's responsibility to check current charts, ERSA and any NOTAMS for flights in this area. Contact details for the aerodrome operator can be found in ERSA.

It is strongly recommended pilots wishing to use Bluewater Park contact the aerodrome operator to ascertain conditions of the airstrip prior to arriving.

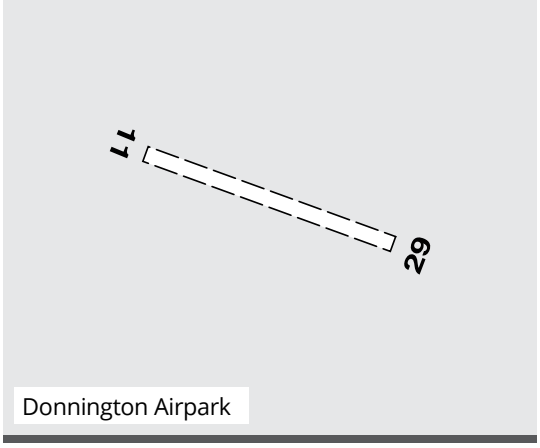


Bluewater Park

Donnington Airpark

Donnington Airpark is uncertified and located in Class G airspace underneath the A035 C LL controlled airspace step, approximately 21 nm to the south-south-east of Townsville, with an elevation of 250 ft. This airfield is also located at the southern end of the Stuart and Upper Ross VFR routes. Ultralight and balloon activity occurs within the vicinity, and the airfield is very close to Starke Field, 3.5 nm to the west.

See and avoid as well as correct radio use is of critical importance in this area. Runway surface is grass. During wet weather, exercise caution as the runway surface may become soft. A full NOTAM service is not available. It is the pilot-in-command's responsibility to check current charts, ERSA and any NOTAMS for flights in this area. Contact details for the aerodrome operator can be found in ERSA.



Donnington Airpark

Starke Field (YSKF)

Starke Field is uncertified, located underneath the C LL035 controlled airspace step, approximately 18 nm to the south-south-east of Townsville, with an elevation of 300 ft. Prior permission is required from the aerodrome operator. This airfield is also located close to the southern end of the Stuart and Upper Ross VFR routes. Ultralight activity occurs in the vicinity of the aerodrome.

The airfield is very close to Donnington Airpark, 3.5 nm to the east. See and avoid as well as correct radio use is of critical importance in this area. Runway directions are 08/26 (approximately 600 m x 20 m) and 15/33 (approximately 1,000 m x 24 m) with a grass surface. During wet weather, exercise caution as the runway surface may become soft.

A full NOTAM service is not available. It is the pilot-in-command's responsibility to check current charts, ERSA and any NOTAMS for flights in this area.

Townsville looking towards Kissing Point

General military information

Conditional RA (restricted area) status

The status of restricted areas (RAs) appears in the DAH and ERSA and is presented in a table on the VTC/VNC. This status indicates the possibility of gaining a clearance through each RA. NOTAMS show activation times and levels for military restricted airspace and **must always** be consulted before flights through these areas, to avoid airspace infringements.

RA conditional status legend

RA1: Pilots may flight plan through the RA and, under normal circumstances, expect a clearance from ATC.

RA2: Pilots must not flight plan through the RA unless on a route specified in ERSA GEN FPR or by agreement with the Department of Defence. However, a clearance from ATC is not assured. Other tracking may be offered through the RA on a tactical basis.

RA3: Pilots must not flight plan through the RA and clearances will not be available.

Townsville military airspace information

As one of the Australian Defence Force's most active training locations, there is extensive military restricted airspace (used for both ground firing and flying activities) around Townsville. Ensure you check AIP SUPs and NOTAMs for any additional requirements or temporary restricted areas.

Some of the restricted areas are active daily with the hours published in ERSA and DAH (R768A), while others are activated via NOTAM. The NAIPS restricted area briefing tool will show restricted airspace status or simply search 'TLX' to see all restricted airspace around Townsville.

To avoid restricted airspace, a danger area D744 SFC – 7000 has been established below R737A. This allows access between restricted areas R751 and R752, and R739 to the north. Consult Townsville flight procedures in ERSA for specific tracking advice.

When R751/R752 are active, remain north of the Hervey Range Developmental Road to remain clear of this airspace.

When R752 is active, South Pinnacle, Mount Margaret and Mount Black are all quite prominent points that can be used to remain clear of R752 and assist with avoiding the 11 DME Class C LL 1,500 ft airspace step.

R768A (Mt Stuart) is active every day except public holidays. Aircraft can remain clear of R768A/B by remaining west of the Ross River, east of the Flinders Highway, over water at (or south of) the Ross River Dam, or by remaining on one of the published VFR routes.

Be aware that during military flying exercises, there may be fast jet aircraft flying in the vicinity of Magnetic Island at low level in Class G airspace. Fast jet aircraft operating under VFR descend over Toomulla (TOOU) and track north of Magnetic Island to hold between Orchard Rocks and the Cape Cleveland Lighthouse below 1,500 ft. These aircraft will be monitoring TVL APP frequency for the duration of the procedure.

Airspace infringement: Hotspots – Cairns

1. Airspace infringement hotspot – inbound from the west

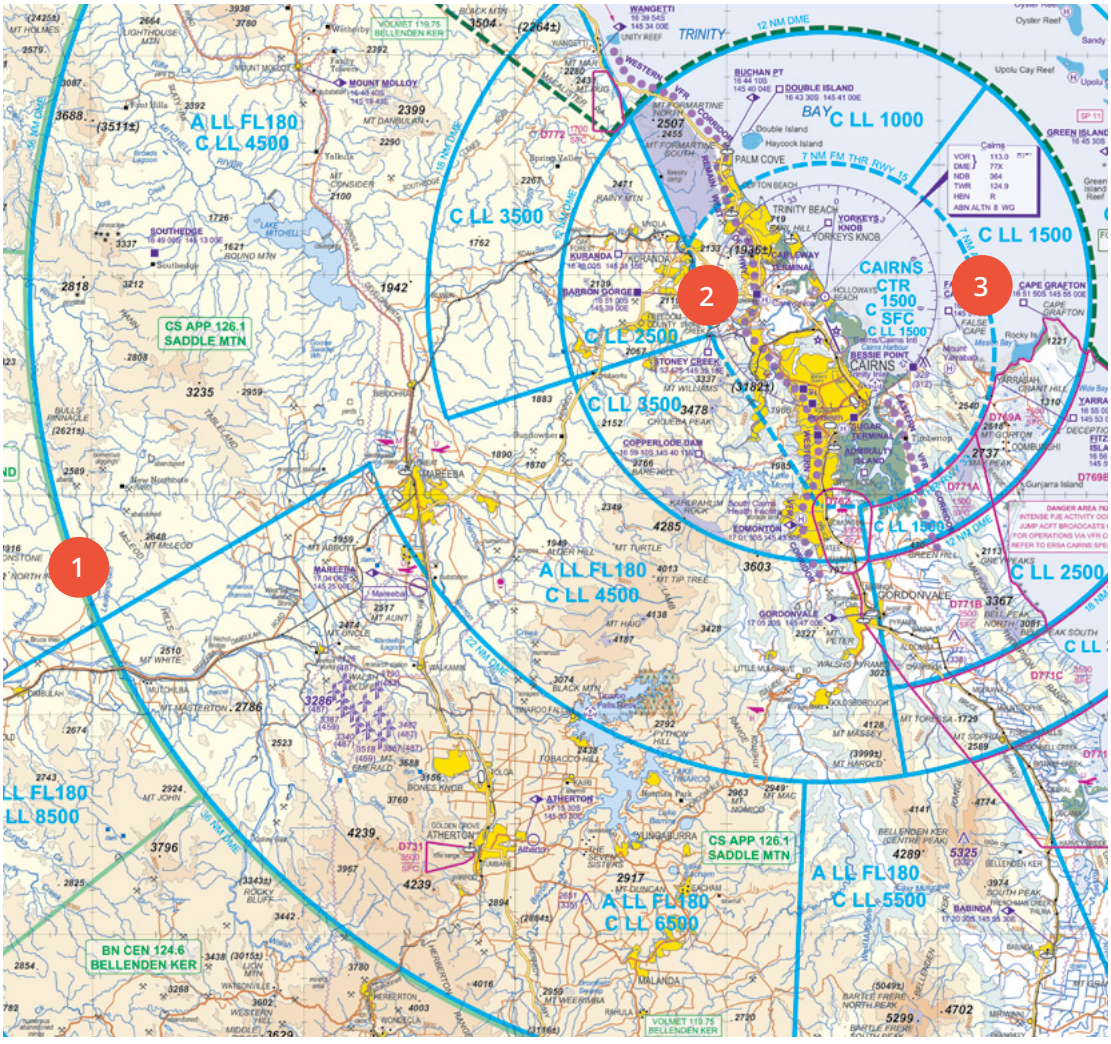
Make sure you allow plenty of time to descend beneath the 36 DME CS LL 4,500 step when eastbound.

2. Airspace infringement hotspot – western VFR corridor

The western VFR corridor is close to terrain. When cleared via this corridor, do not leave the corridor until specifically instructed by ATC because you cannot be seen on ATC radar in certain areas due to terrain shielding. Good geographical markers are the Cook and Bruce Highways.

3. Airspace infringement hotspot – Cape Grafton/ False Cape

Be aware of misidentification of Cape Grafton with False Cape as you could infringe the 7 nm CTA step.



Airspace infringement: Hotspots – Townsville

1. Airspace infringement hotspot

Pre-brief to understand the various common routes when transiting in/out of TVL CTR and CTA. When manoeuvring on these routes, be aware of the Class C airspace steps and the distances and heights at which you will need clearance to operate.

2. Airspace infringement hotspot

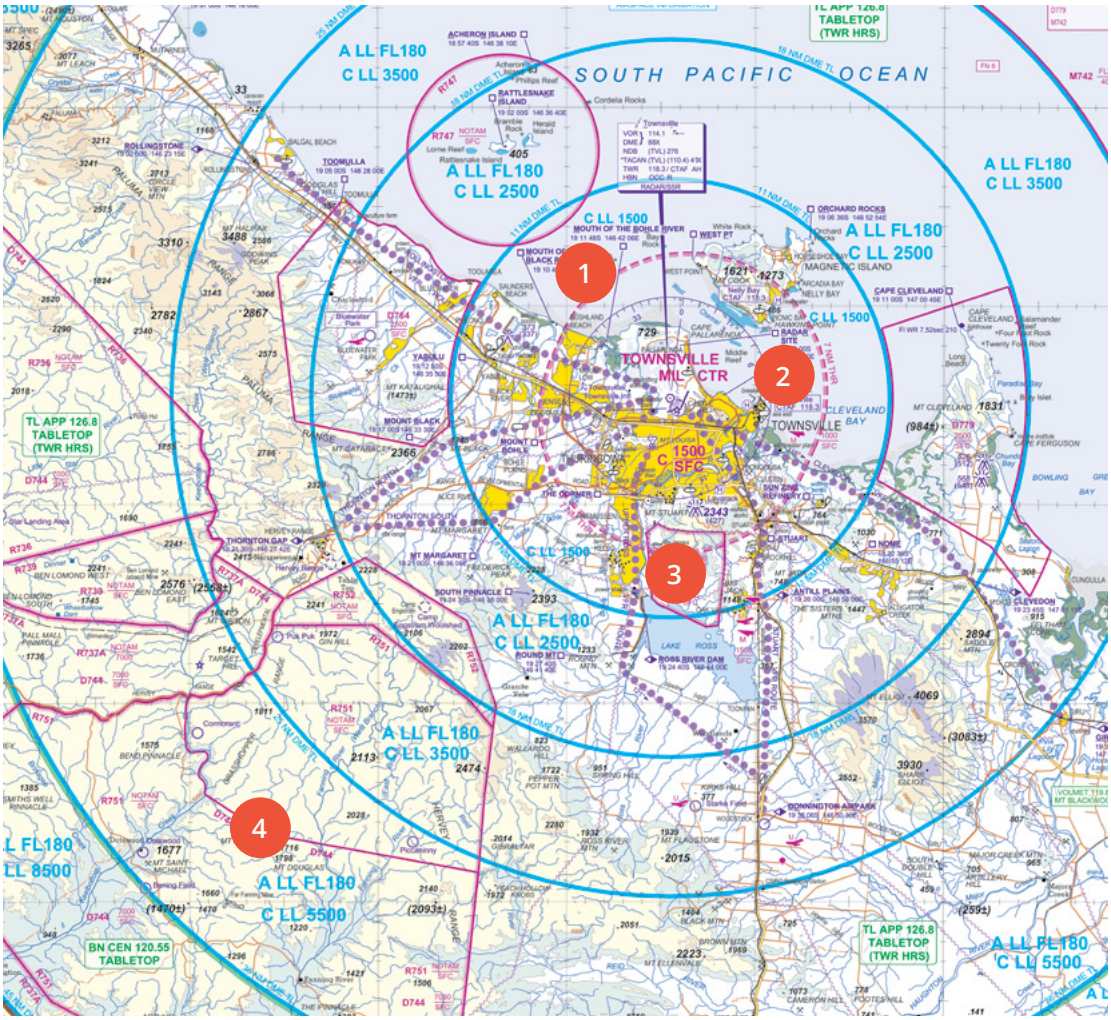
Exercise caution when navigating to/from Magnetic Island. Keep clear of Class C airspace when instructed to remain OCTA; maintain radio communication while waiting for further instruction.

3. Airspace infringement hotspot

Pre-brief R768's lateral confines and the respective airspace activation heights: R768A SFC-2000 ft and R768B SFC-3000 ft.

4. Airspace infringement hotspot

Pre-brief and operate with caution when approaching R750, R751 and R752 as these airspaces are active from the surface. Note the position of the R737A/R751 boundary.



Remain current with updated NOTAMs when operating within and around TVL CTA, CTR and restricted areas to avoid infringement. Due to the fluidity of military movements, NOTAMs are subject to change, sometimes at very short notice.

Cairns ground operations

Cairns Airport

Taxiing for departure

In addition to the points on runway incursions, here are some procedural tips for departing from Cairns.

All GA parking is on the western side of the runway, called the GA lines, where itinerant aircraft may park. Look out for green boxes which indicate a reserved park on the lines. Run-ups may be done behind the holding line within this parking area. If run-ups are required, advise ATC on your taxi call and when completed, request further taxi.

If using RWY 15, you will be cleared for the A2 holding point for departure. No run-ups permitted on the A2 taxiway. There is an additional run-up bay just north of A4 called the western run-up bay.

If RWY 33 is in operation, expect to taxi southbound on the Alpha taxiway, past the A4 holding point, to the Yankee holding point for RWY 33.

When taxiing near the A3 holding point, exercise caution and keep a vigilant lookout due to its very close proximity to the GA parking area, especially when RWY 15 is in use, as aircraft are vacating the runway via this A3 taxiway. At these times, it can be a busy area with multiple aircraft and vehicle movements.

Taxiing after arrival

In addition to the points on runway incursions, here are some procedural tips for arriving at Cairns.

RWY 15

If not instructed otherwise, vacate at A3, which is adjacent to the GA parking area. Permission is required to vacate at A2 and B2. Keep in mind that the A3 taxiway is a significant distance from the RWY 15 threshold, so if you land on the threshold, you will have a one km taxi before you can vacate the runway.

Once you vacate the runway, taxi on A3 until you have crossed the A3 holding point. (Do not stop prior as you may have another aircraft behind you and, at this point, you have not yet cleared the runway). Once past the A3 holding point, contact Ground on 121.7 to receive taxi instructions. You may continue a slow taxi while waiting for Ground to respond, provided all is clear in front of you to do so.

RWY 33

Vacate at A4 the taxiway unless otherwise instructed. Permission is required to vacate the runway via taxiway Y or A3. Proceed beyond the A4 holding point, then contact Ground on 121.7 for taxi instructions. Turn right off taxiway A4 and proceed to the GA parking area.

Approval from ATC is required to vacate the runway using taxiways Y and B5.

Cairns helicopter operations

With the trade winds experienced at Cairns, RWY 15 is the most commonly used. There is a lot of activity to and from the Barrier Reef to the east of Cairns, and also up to the Barron Gorge and Kuranda. You need to be aware when operating in the vicinity of Stoney Creek, a check point when requested by ATC for VFR fixed-wing traffic.

For helicopter arrivals, notify your intended landing point on first contact with ATC. For departures, notify ATC of your location and intended departure position on the aerodrome with your ready call. Noise abatement procedures apply – see ERSA for details.

The western VFR corridor runs along the foothills to the west of Cairns. You must maintain the altitude assigned to you by ATC at all times and, if you are unable to maintain tracking within the corridor, advise ATC immediately.

Cairns is an international airport and can be very busy, so the earlier you can contact ATC inbound, the better. If in any doubt about local procedures, pilots should call a local operator or ATC for advice.

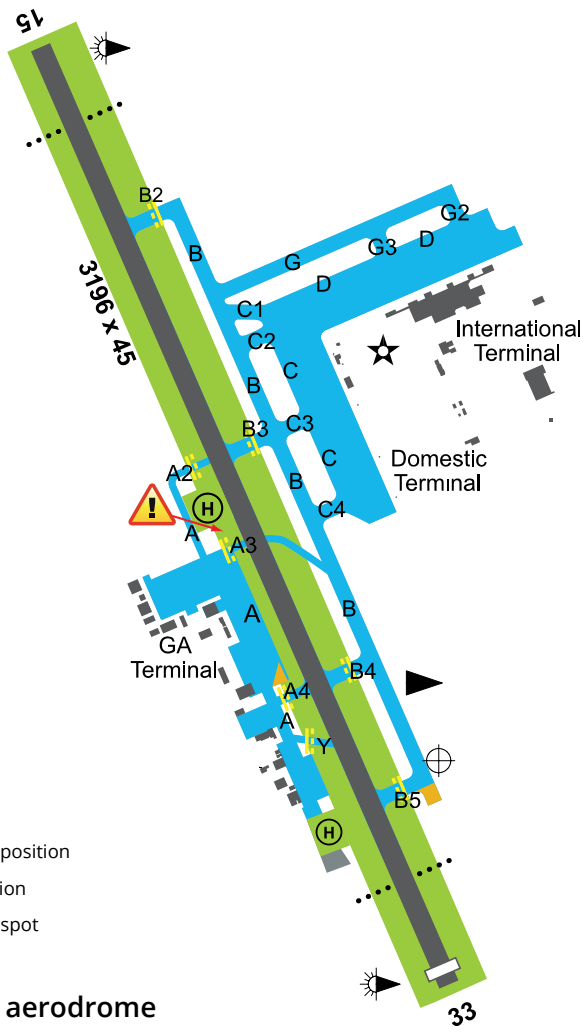
Helicopter landing areas

Cairns airport has a mid-field pad located on the western side of the runway, between taxiways A2 and A3. There is another landing area on the western side of the runway towards the southern end.

Helicopter operations are also conducted from over-water pads, a short distance to the south of the aerodrome at the Cairns harbour area, called The Pier.

If you are visiting Cairns, you would typically proceed to the mid-field pad for landing and then follow parking instructions from ATC. Fly neighbourly procedures apply.

A pilot flying a helicopter



Key

- Run-up bay
- Intermediate holding position
- Runway holding position
- Runway incursion hotspot

Operations on the aerodrome

Apron area – no taxi clearance required. Monitor Ground on 121.7 MHz.

Taxiway – taxi clearance from Ground required before entering this area.

Runway – specific clearance required from ATC before entering this area.

Definitions

Apron area

A defined area intended to accommodate aircraft for purposes of loading or unloading passengers, mail, cargo, fueling, parking or maintenance.

Taxiway

A defined path established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another.

Runway

A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

Townsville Ground operations

Townsville Airport

Townsville accommodates a high volume of RPT air transport and scenic flights, other air transport flights along with RFDS flights. It also has major military significance.

Due to prevailing winds, RWY 01 is the most commonly used, so expect a large number of civil and military aircraft approaching from the south, using the ILS approach for 01.

This means there can be a delay in issuing clearances for fixed-wing and helicopter traffic transiting the zone or inbound to land, particularly if inbound from the west. Therefore, make sure you have submitted a flight plan so ATC can process your request as quickly as possible.

RWY 07 is commonly used for arrivals by light aircraft, particularly from the west and north. GA departures still tend to use RWY 01 due to its proximity to the GA parking areas.

The RAAF provides air traffic services at Townsville and tries to meet the requests of civil aircraft. If you are unsure of any procedures while operating in and around Townsville, contact ATC and ask for assistance. ATC provides a flight information service on Townsville Approach 126.8, under the class C control steps. Outside 36 nm, this service is provided by Brisbane Centre, 120.55.

Caution:

- Helicopters frequently operate to and from Pad Arnold on taxiway A7 near hangar 85.
- Aircraft landing on RWY 07 must obtain specific clearance to cross RWY 01/19 after landing. A holding point is marked to taxiway D3 at the upwind end of RWY 07.

Townsville helicopter operations

Townsville accommodates a high volume of RPT and military traffic. Due to prevailing winds, the most used runways are 01 and 07, so expect a large number of civil and military aircraft approaching from the south.

There can be a delay in issuing clearances for fixed-wing and helicopter traffic transiting the zone or inbound to land, particularly if inbound from the west. For this reason, make sure you have submitted a flight plan so that ATC can process your request as quickly as possible.

Military restricted areas R737, R751, R752, R736 and R739 extend nearly 100 miles to the west and south of Townsville. It is vital you read NOTAMs before operating here. D779 (Cape Cleveland training area) is used extensively by military helicopters for day and night training below 2,500 ft AMSL. The training area frequency is 126.05.

Other helicopter sites (HLS) within the Townsville aerodrome vicinity include:

- Nelly Bay/Picnic Bay HLS (which use TVL TWR freq 118.3 as a CTAF) – both just within 7 nm.
- The Ville HLS (at the Casino/Ardo – also uses 118.3 as CTAF).
- The Hospital (YXTL) and Lavarack Barracks at the northern foot of Mt Stuart.

A pilot flying a helicopter

Key

- Intermediate holding position
- Runway holding position
- Runway incursion hotspot

Operations on the aerodrome

Apron area – no taxi clearance required. Monitor Ground on 121.8 MHz.

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Runway

A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

Ground operations

Key areas when planning to navigate around an aerodrome are:

- study the layout, paying particular attention to complex intersections and RWY incursion hotspots in ERSA
- anticipate your taxi route to and from the RWY in use based on information from the ATIS, NOTAMs, ERSA, recent experience and the aerodrome chart
- have the aerodrome chart or diagram readily available to use during planning and while taxiing
- check the route on which you are taxiing against the chart or ERSA and again, pay special attention to complex intersections
- continually scan for conflicting traffic and holding point markings
- confirm your assigned route if you are in doubt about the taxi instructions received from a controller.

A specific clearance is required to enter, backtrack, line-up on, cross or take-off from a runway. When taxiing, ensure you have received a specific clearance to cross any runway on your taxi route.

The clearance will include your callsign and the words 'CROSS RWY XX'. An ATC clearance to line-up does not authorise the pilot to backtrack on the runway.

While taxiing, the use of standard operating procedures and your radio will increase the safety of operations. This includes following instructions from ATC, confirming your understanding of ATC instructions by ensuring correct readbacks, maintaining situational awareness, using all resources available and ensuring effective pilot/controller communication practices. At the holding point, ensure your 'ready' call is on the correct frequency.

Using non-standard radio calls or readbacks affects the ability of ATC to understand your intentions and confirm you have understood your clearance.

The principle of good communication is to effectively articulate:

- who you are
- where you are
- what you want.

When landing, runway confusion can be avoided by:

- paying careful attention to runways in clearances
- always reading back an assigned runway in full
- taking sufficient time during the approach briefing to determine how positive runway identification will be achieved, particularly if using a non-precision, circling or visual approach
- visually identifying the correct runway before entering or landing on it, depending on weather conditions
- distinguishing between runway lighting and taxiway lighting, which are coloured differently.

Radio use – requesting airways and taxi clearance Cairns

Cairns ATIS available on FREQ 131.1, VOR/DME 113.0, telephone 07 4050 5311

Cairns terminal information _____ **Runway** _____ **Wind**_____

X-Wind_____ **Visibility**_____ **Cloud**_____**Temperature** _____

QNH _____

Requesting airways clearance:

Clearance delivery FREQ 128.75

Cairns clearance delivery, _____

(*Aircraft type & callsign*), for _____

(*training area/flight planned destination)*

_____

(*Altitude*), **Request clearance.**

read back

Cleared to, _____

(*destination via tracking details*),

_____ (Altitude), **Squawk**

_____(*Transponder Code*),

_____ (*Callsign*).

Requesting taxi clearance

Ground FREQ 121.7

Cairns ground, _____

(*Aircraft callsign*), _____ **P.O.B**

(_____ (*Dual/Solo if applicable*))

Received _____ (*ATIS*),

at _____ (*Location on*

Airfield e.g. GA), **request taxi.**

read back

Cleared to taxi, runway

_____ **via Taxiway**

_____ (*Taxi route*

Details), **Cross/Hold at**

_____ (*Holding point*

Instructions). _____ (*Callsign*).

The Cairns control tower

Radio use – requesting airways and taxi clearance Townsville

Townsville ATIS available on FREQ 133.5, VOR/DME 114.1, telephone 07 4752 1216

Townsville terminal information _____ **Runway** _____ **Wind**_____

X-Wind_____ **Visibility**_____ **Cloud**_____**Temperature** _____

QNH _____

Requesting airways clearance:

Clearance delivery FREQ 128.1

Townsville clearance delivery, _____ (*Aircraft type & callsign*), for _____ (*training area/flight planned destination)* _____ (*Altitude*), **Request clearance.**

read back

Cleared to, _____ (*destination via tracking details*), _____ (Altitude), **Squawk** _____(*Transponder Code*), _____ (*Callsign*).

Requesting taxi clearance

Ground FREQ 121.8

Townsville ground, _____ (*Aircraft callsign*), _____ **P.O.B** (_____ (*Dual/Solo if applicable*)) **Received** _____ (*ATIS*), **at** _____ (*Location on Airfield e.g. GA*), **request taxi to** _____.

read back

Cleared to taxi, runway _____ **via Taxiway** _____ (*Taxi route Details*), **Cross/Hold at** _____ (*Holding point Instructions*). _____ (*Callsign*).

Ground FREQ 121.8

Townsville Ground, _____

(*Aircraft callsign*), _____

_____ **Request cross holding point**

_____ (*Holding point identifier*)

read back

Cross holding point _____

_____ (*callsign*).

Tower FREQ 118.3

Townsville tower, _____

(*aircraft callsign*), **ready runway**

_____ (*runway number*).

read back

Approach 126.8/Remain this frequency, turn right/left

_____ (*assigned heading/*

turn direction/tracking instructions),

track via_____(*if applicable*),

Runway_____**Cleared for**

Take-off_____(*callsign*).

The following components of an ATC transmission require accurate readback:

1. an ATC route clearance in its entirety, and any amendments
2. en route holding instructions
3. any route and holding point specified in a taxi clearance
4. any clearances, conditional clearances or instructions to hold short of, enter, land on, line-up on, wait, take-off from, cross, taxi or backtrack on any runway
5. any approach clearance
6. assigned runway, altimeter settings directed to specific aircraft, radio and radio navigation aid frequency instructions
7. SSR codes, data link logon codes
8. level instructions, direction of turn, heading and speed instructions.

Cairns departure and tracking

Helicopters must advise of current position and intended departure position on the aerodrome with the 'ready' call. An airways clearance for VFR aircraft to operate in the Cairns CTR and for VFR aircraft departing directly into Class G airspace will be issued by Cairns Clearance Delivery on 128.75.

A take-off clearance constitutes a clearance to operate within the CTR or depart the zone in accordance with the intentions notified with the 'ready' call.

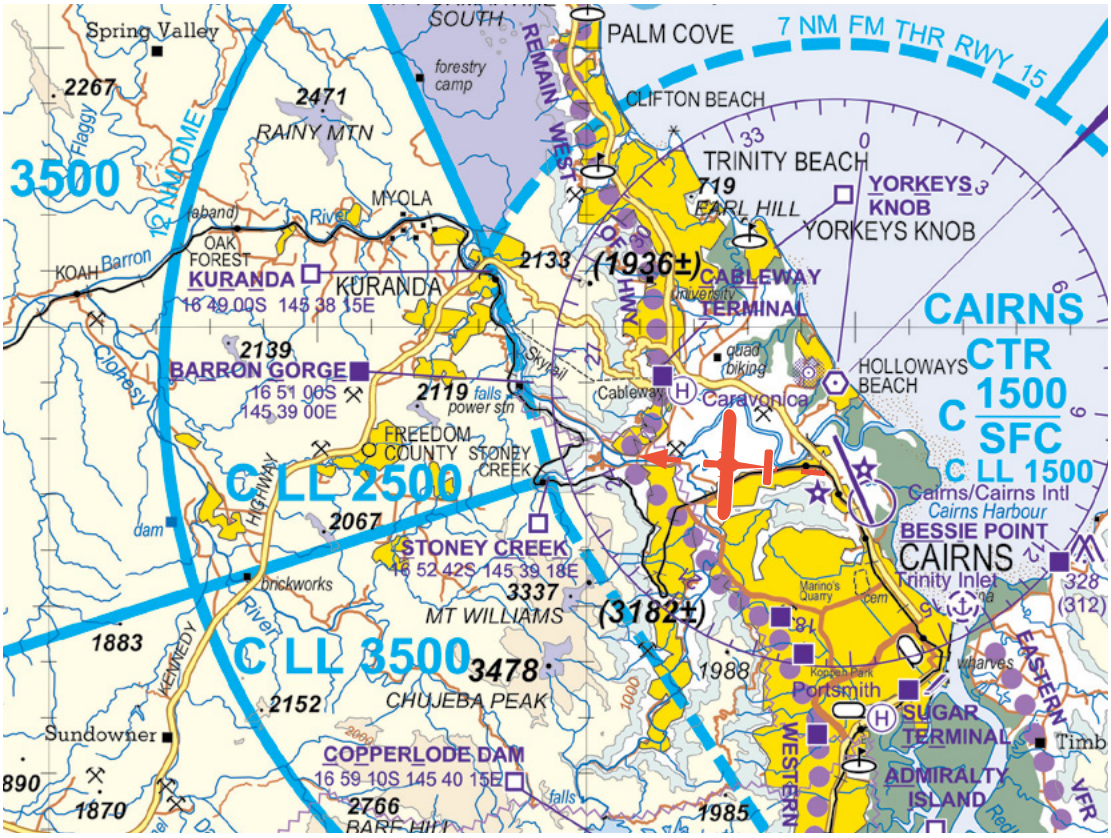
All aircraft departing directly into and remaining within Class G airspace at or below 1,000 ft should change to Cairns Approach frequency 126.1.

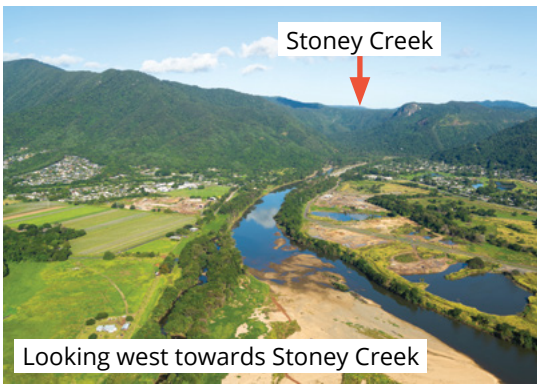
Maintaining a good lookout is essential. Consult latest ERSA and operational documents for latest information. If in doubt, contact Cairns ATC for clarification.

Cairns airport and tower

Departure and tracking – west

For aircraft departing to the west of Cairns, use caution and plan carefully due to the mountainous terrain and the potential for cloud formations limiting VFR flight terrain clearance and visibility requirements. Always have a plan B in case of unplanned/forecast conditions or other emergencies.





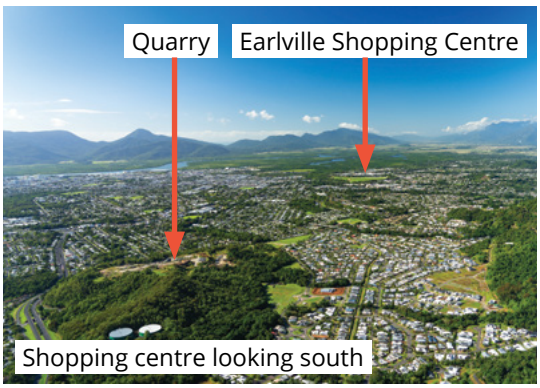
Looking west towards Stoney Creek

Western VFR corridor

Flights established in the western VFR corridor MUST adhere to the following (as contained in ERSA):

- Tracking south from Wangetti, follow the coastline to Buchan Point.
- From Buchan Point, remain WEST of the Captain Cook Highway between Palm Cove and the cableway terminal.
- From the cableway terminal, remain WEST of the Cairns Western Arterial Road to Marino's Quarry.
- Remain WEST of Marino's Quarry, Koppen Park, Earlville Shopping Centre and Cairns Golf Course.
- Remain WEST of the Bruce Highway south of the Golf Course and clear of the Edmonton parachute areas.

Due to poor radar coverage below 2,500 ft to the southwest of the aerodrome, aircraft must not leave the corridor until specifically instructed by ATC.

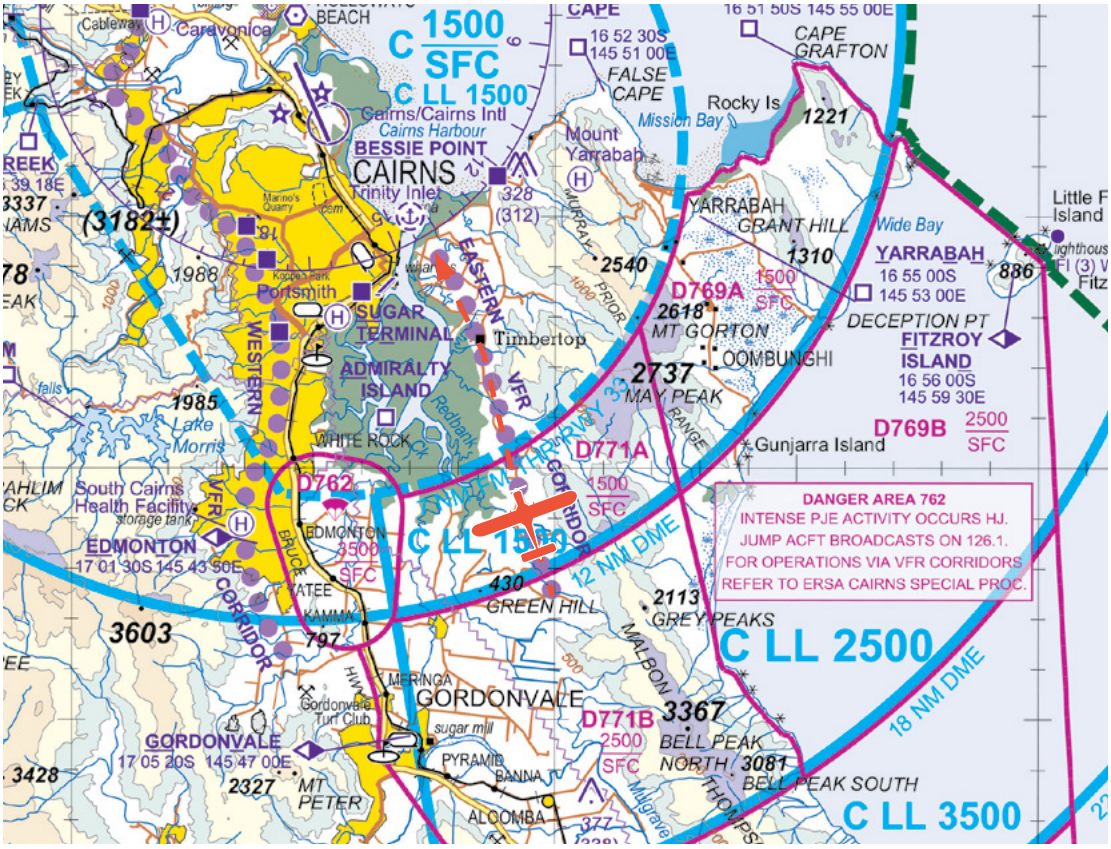


Inbound via the eastern VFR corridor

Flights cleared inbound to Cairns via the eastern VFR corridor MUST adhere to the following (as contained in ERSA):

» Follow the eastern VFR corridor from east of Green Hill until abeam (east) of the sugar terminal.

» From abeam the sugar mill, follow ATC instructions.

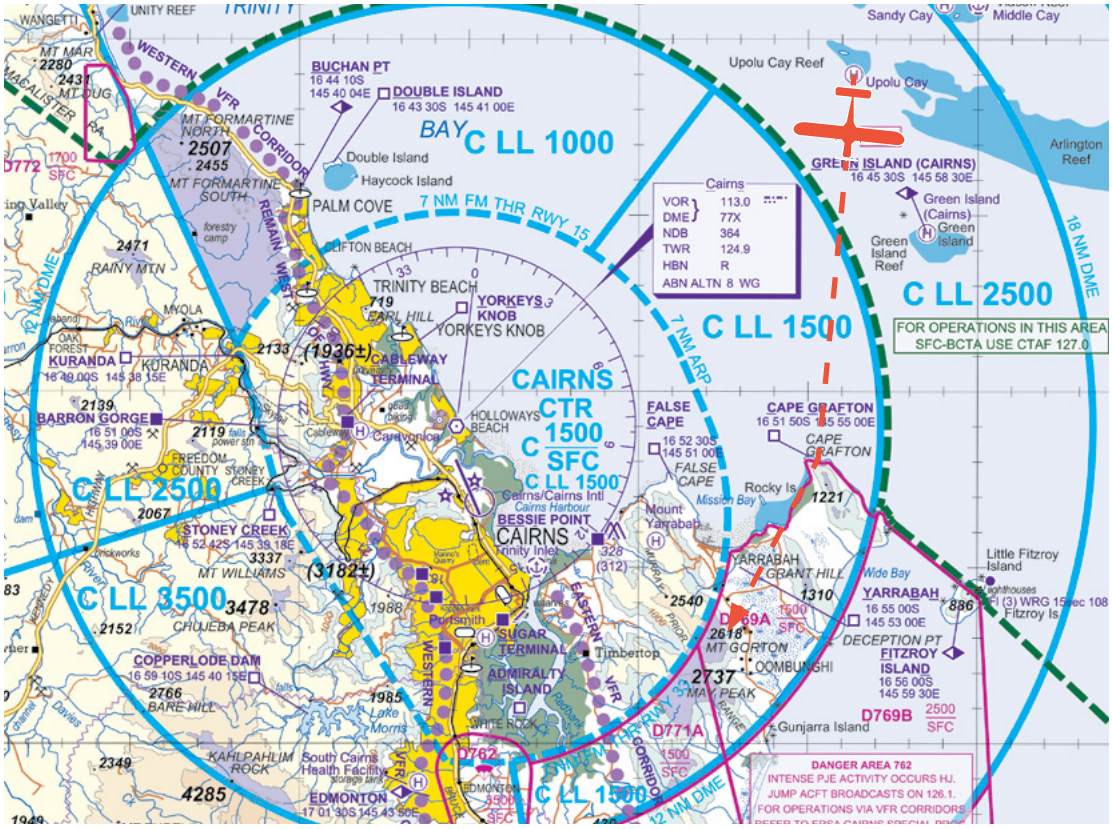


Green Hill looking towards Cairns

Arrival – east

All aircraft intending to enter Cairns Control Zone from between Mt Gorton, Cape Grafton and Upolu Cay at 500 ft, must contact Cairns Tower for airways clearance prior to entering the zone.

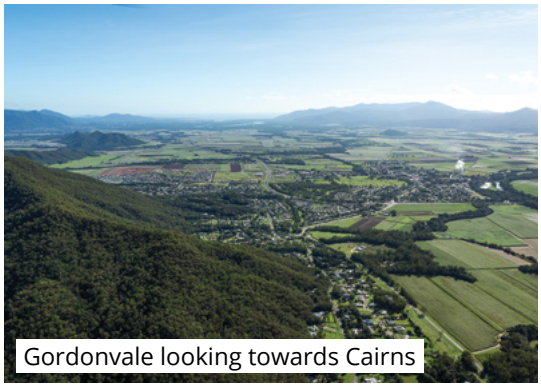
For inbound tracking for VFR aircraft from the east, use the published VFR approach points of Fitzroy Island and Green Island. Pilots of aircraft who are OCTA inbound to Cairns are reminded to contact Cairns Approach to obtain squark code prior to obtaining airways clearance from TWR.



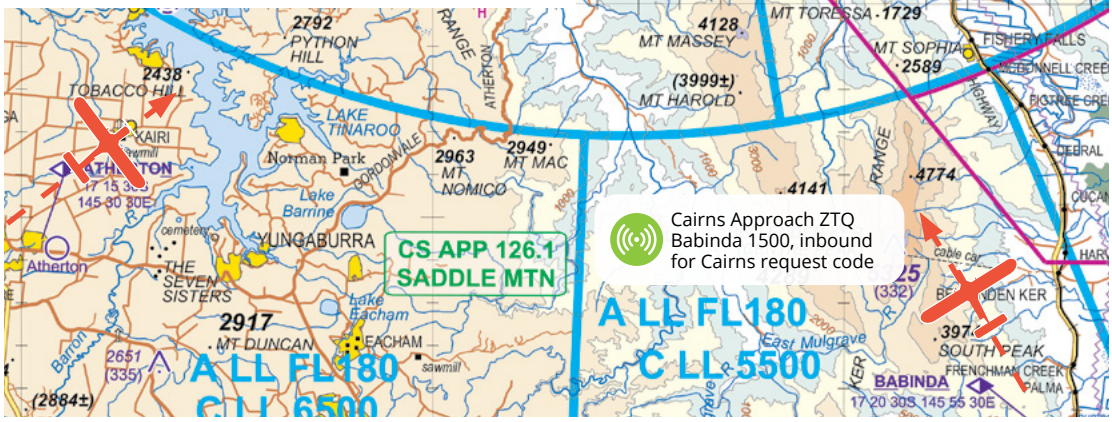
Mount Gorton looking towards Cairns

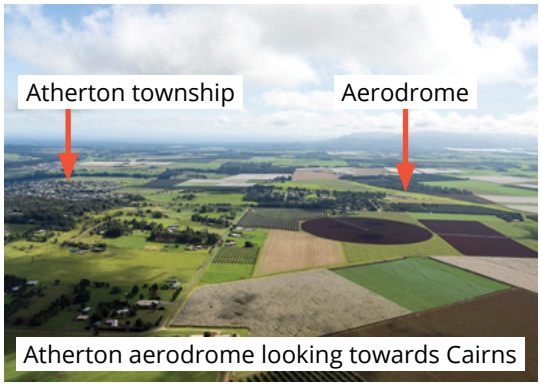
Arrival – south

Aircraft intending to enter Cairns Control Zone from the south should use the VFR approach points of Babinda, Atherton, Gordonvale and Edmonton. Remain clear of Edmonton D762 where parachute activity takes place. Pilots of aircraft inbound to Cairns OCTA, are reminded to contact Cairns Approach to obtain squark code prior to obtaining airways clearance from TWR.



Gordonvale looking towards Cairns





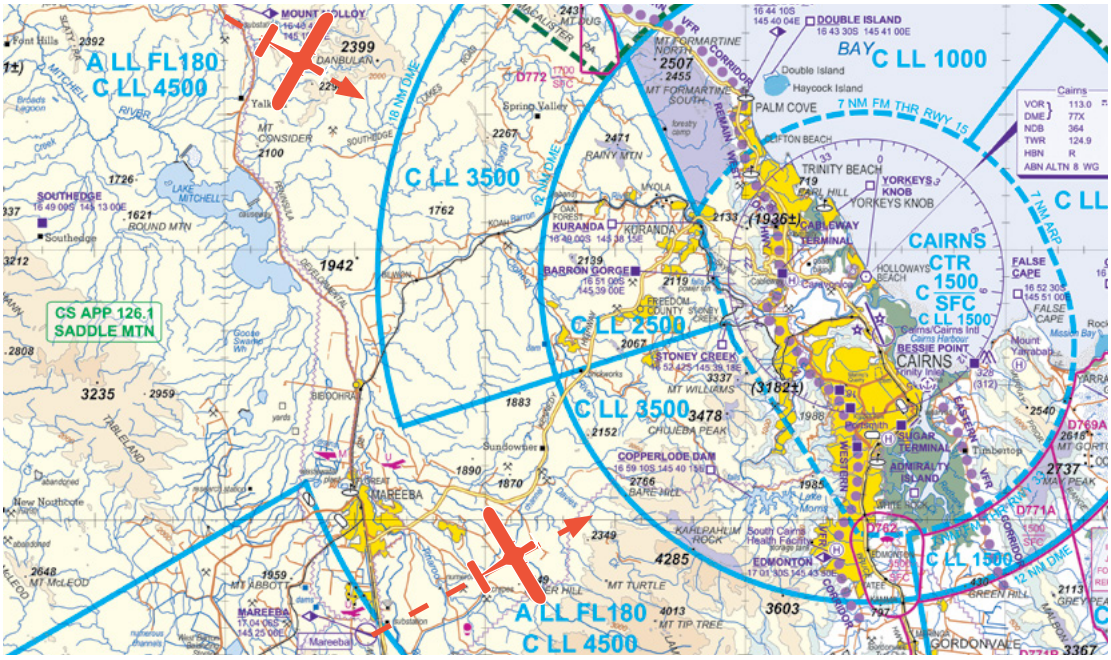
Atherton aerodrome looking towards Cairns

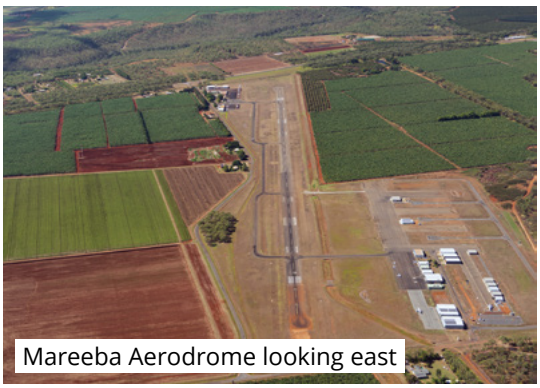
Babinda looking towards Cairns

Arrival and tracking – from the west

All aircraft intending to enter Cairns Control Zone from the west should use the VFR approach points of Mareeba and Mount Molloy. Stoney Creek (SCRK) or Kuranda (KRN) are preferred entry points. Kuranda can be a better point of entry when there is a strong SE wind. Stoney Creek has high terrain immediately to the SE and there is often strong mechanical turbulence in the vicinity. If flying from Mareeba to Cairns, it is recommended to obtain a landing slot time prior to departure (this means touching down Cairns at the allocated time).

Pilots of aircraft who are OCTA inbound to Cairns, are reminded to contact Cairns Approach to obtain squark code prior to obtaining airways clearance from TWR. It is critically important to plan ahead and take into consideration weather, emergency landing areas, visibility especially cloud and clearance with the mountainous terrain before you arrive at Cairns. Always have a plan B when flying over this area. Do not press on into a potentially bad situation.

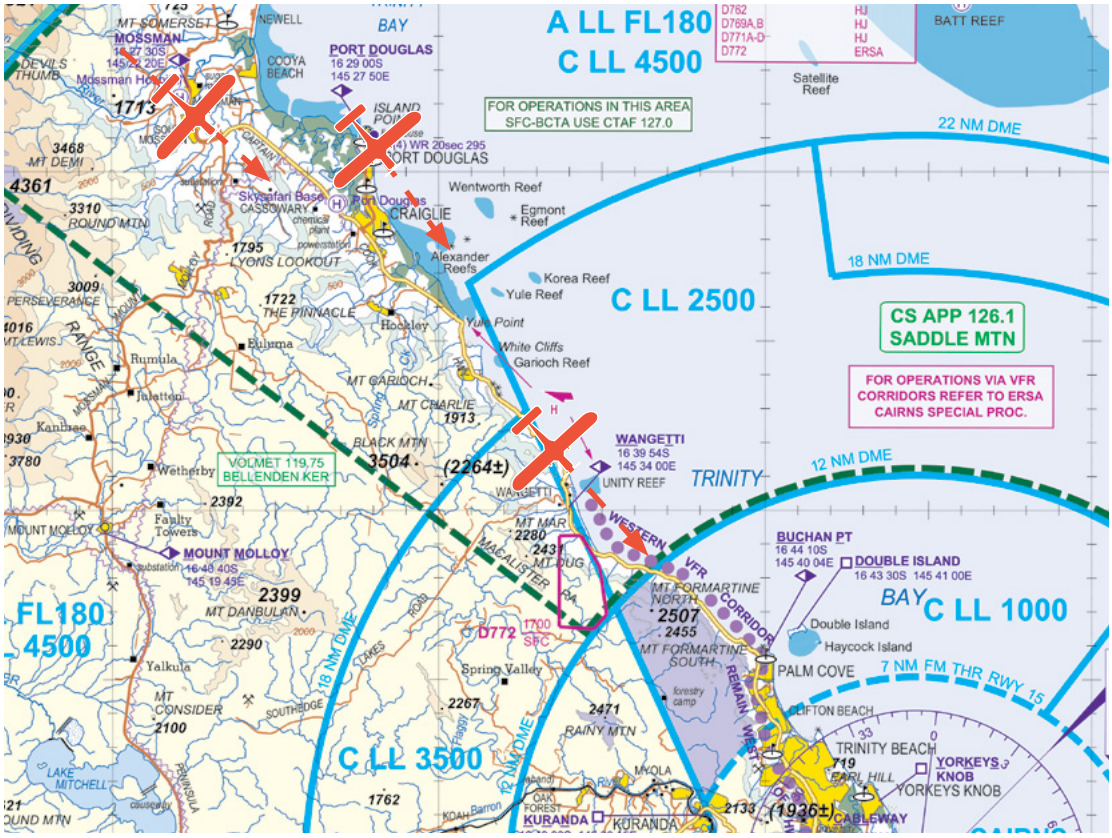



Mareeba Aerodrome looking east


Mount Molloy township looking towards Cairns

Arrival and tracking – from the north

Aircraft intending to enter Cairns Control Zone from the north should use the VFR approach points of Mossman, Port Douglas, Wangetti and Buchan Pt. ATC will often ask pilots to hold at Double Island (DOU) when waiting for a clearance. Pilots of aircraft who are OCTA inbound to Cairns, are reminded to contact Cairns Approach to obtain squark code prior to obtaining airways clearance from TWR. Tracking coastal will keep you away of the high terrain and associated weather and turbulence.



Mossman looking south

Townsville departure and tracking

VFR aircraft must advise departure tracking intentions to the tower with their 'ready' call on tower frequency 118.3. An airways clearance for VFR flights departing YBTL will be issued by Townsville Clearance Delivery. Should the entire flight be remaining within the Townsville CTR (such as circuits), aircraft can instead contact Townsville Ground directly for an airways clearance.

Please note that for flights remaining within the Townsville CTR or for instrument approach training, a booking is required to be made as per the Townsville ERSA information.

A take-off clearance constitutes a clearance to operate within the CTR or depart the zone in accordance with the intentions notified with the 'ready' call.

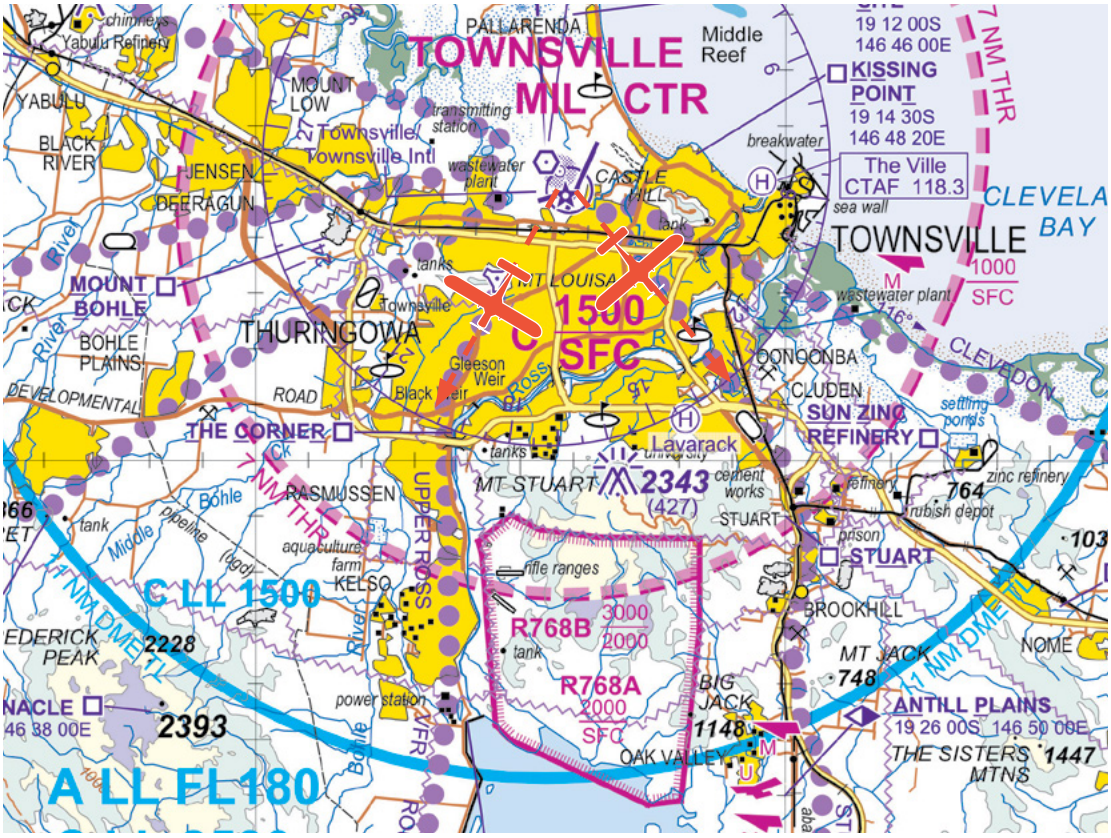
All pilots are to adhere to the Noise Abatement Procedures contained in ERSA.

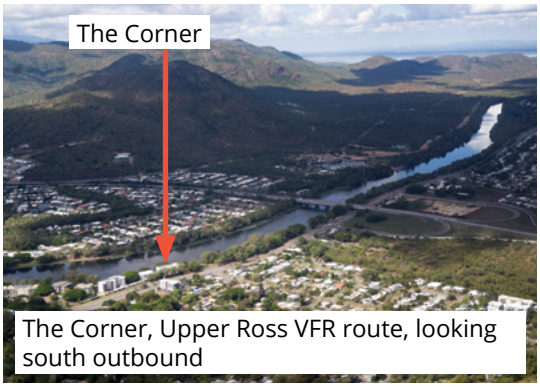
Townsville airport

Departure and tracking – south

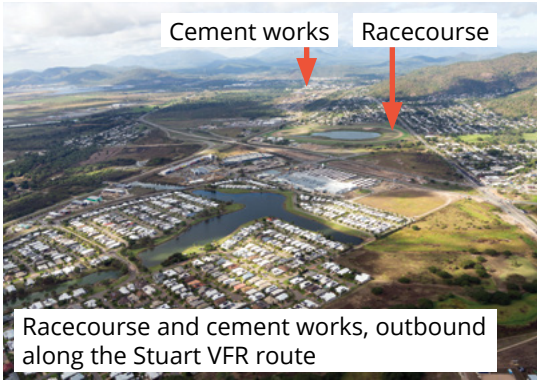
Any planned departure track between 138 and 195 degrees magnetic conflicts with R768A and R768B. Expect a requirement to reach A020 (R768A active) or A030 (R768A and R768B are active) by 6 DME or be provided with lateral tracking to remain clear. Consult ERSA for procedures and if unfamiliar, advise ATC.

Can also plan to use the Upper Ross or Stuart VFR routes as published.





The Corner, Upper Ross VFR route, looking south outbound

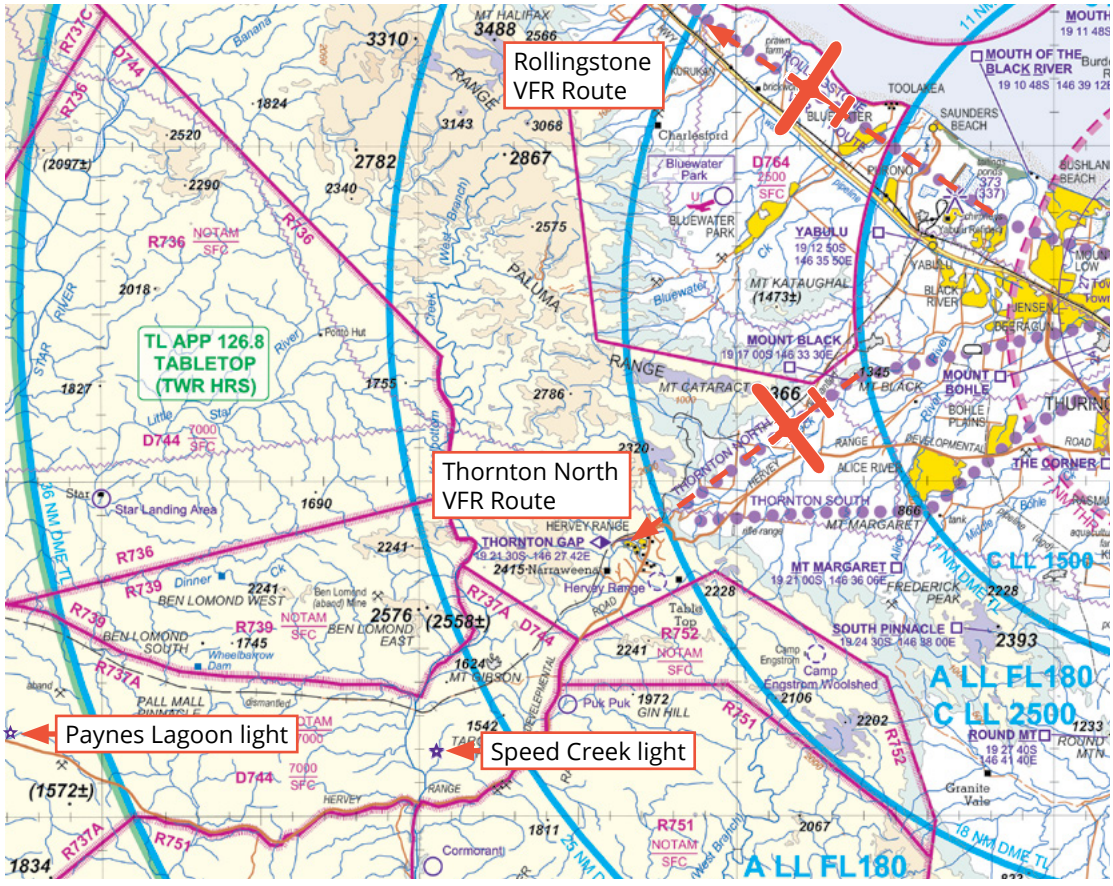


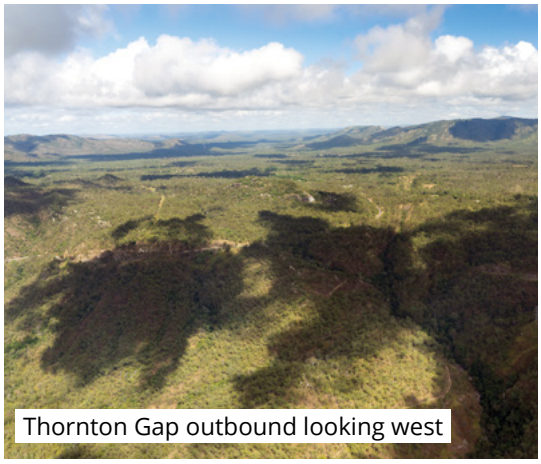
Racecourse and cement works, outbound along the Stuart VFR route

Departure and tracking – west

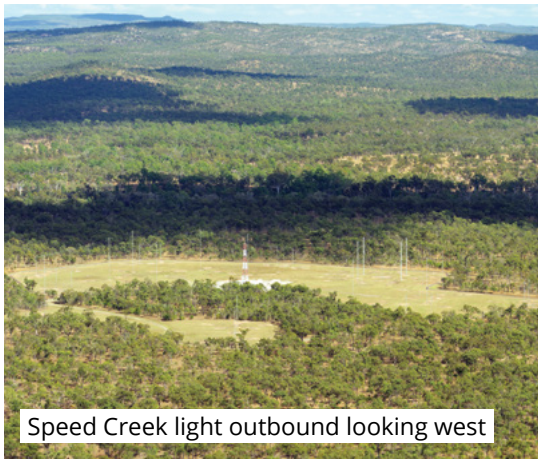
When departing to the west of Townsville, observe the following instructions to remain clear of restricted areas:

- When R736 and R739 are active, follow ATC instructions which may be to track via the Thornton South or Thorton North VFR route to Thorton Gap. From Thorton Gap, follow the dismantled Yabulu railway line to south of Greenvale
- When R751 and/or R752 are active, follow ATC clearance instructions. If OCTA once clear of the TL CTR, track north of Hervey Range Development Road. If unfamiliar, advise ATC.
- When R736, R739, R751 and R752 are active simultaneously, follow ATC instructions and when OCTA clear of the TL CTR, track north of the Hervey Range Development Road to Thornton Gap (TNP). Then remain north of Hervey Development Road via the navigation light at Speed Creek to the ALA at Paynes Lagoon which also has a navigation light (located 12 nm tracking 263 degrees from nav light at Speed Creek).
- If tracking via the Rollingstone VFR route, track between the townships of Mount Low and Bushland Beach, then to the north of Yabulu refinery over the southern end of the tailings ponds, then north of and parallel to the Bruce Highway (between the Bruce and the coastline) to the township of Bluewater. Then track between Toomulla and the Bruce Highway towards the golf course near Balgal Beach.

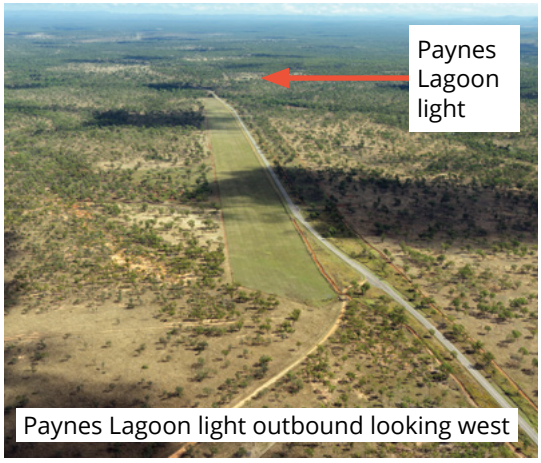




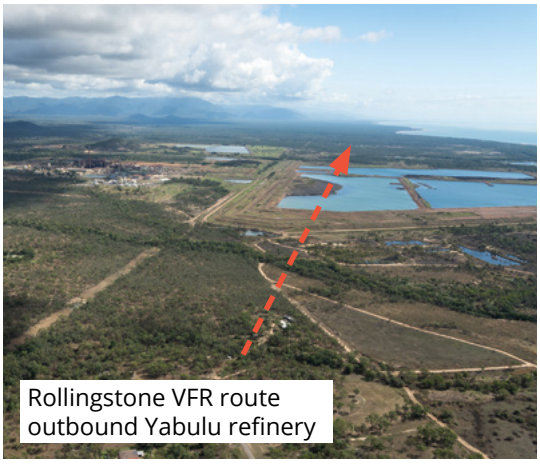
Thornton Gap outbound looking west



Speed Creek light outbound looking west



Paynes Lagoon light outbound looking west



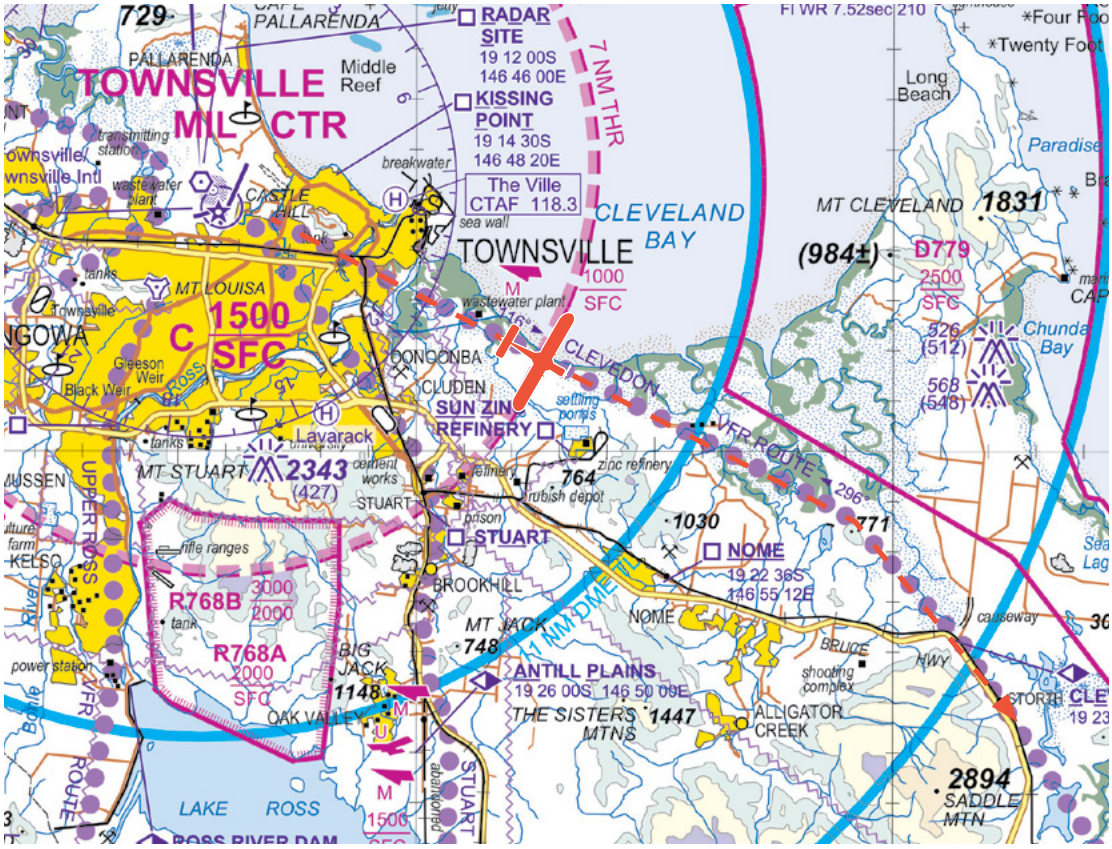
Rollingstone VFR route
outbound Yabulu refinery

Rollingstone VFR route outbound from Townsville airport

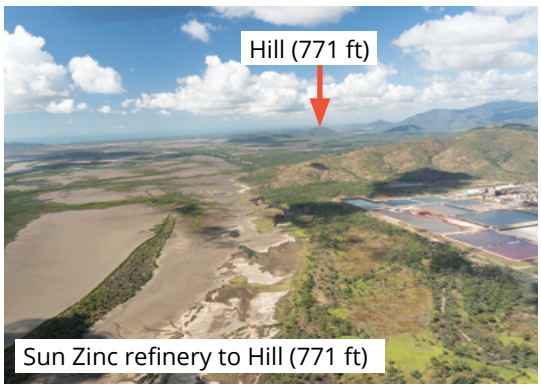
Departure and tracking – east

For departures east of Townsville, follow ATC instructions and be aware of the Clevedon VFR route.

If using the Clevedon VFR route, track inland of Castle Hill, then to the wastewater plant. Track 116 degrees magnetic to the spot height of 771 ft, then to the township of Clevedon.



Looking east on Clevedon VFR route from southern side of Castle Hill towards Sun Zinc refinery



Sun Zinc refinery to Hill (771 ft)

Departure and tracking – Palm Island (YPAM)

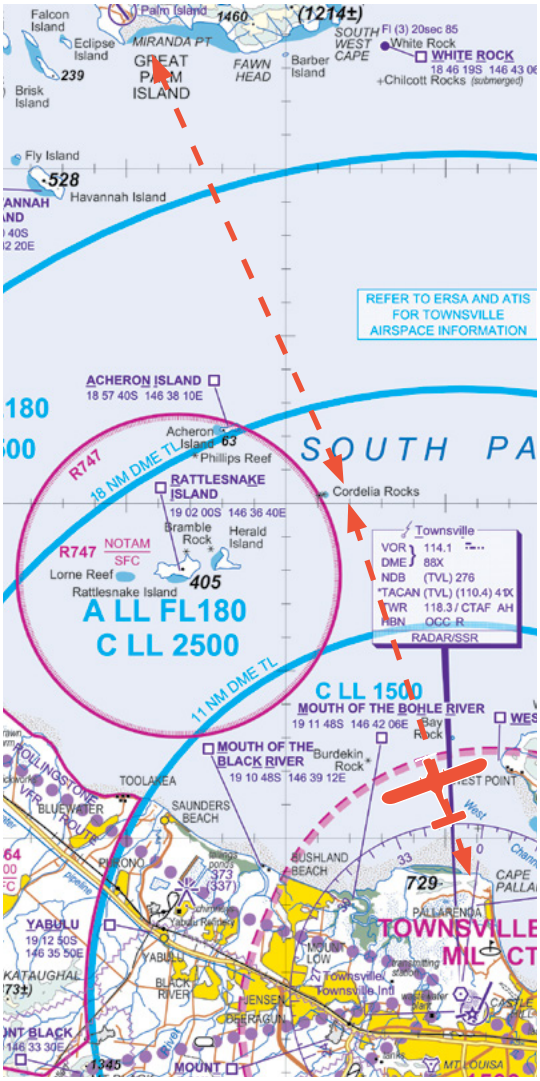
When tracking to and from Palm Island, expect to receive either the Cordelia or Rattlesnake clearance, the details of which are contained in ERSA.

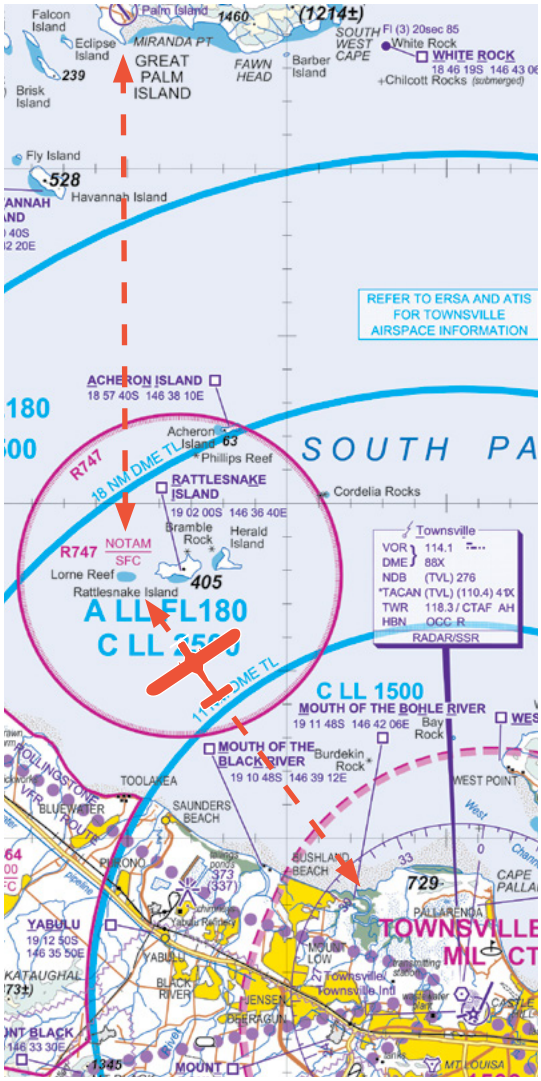
Cordelia clearance to or from Palm Island:

- Track east of the Radar Site (RDRS), then east of Cordelia Rocks to Palm Island.
- Level will be as cleared by ATC.

Rattlesnake clearance to or from Palm Island:

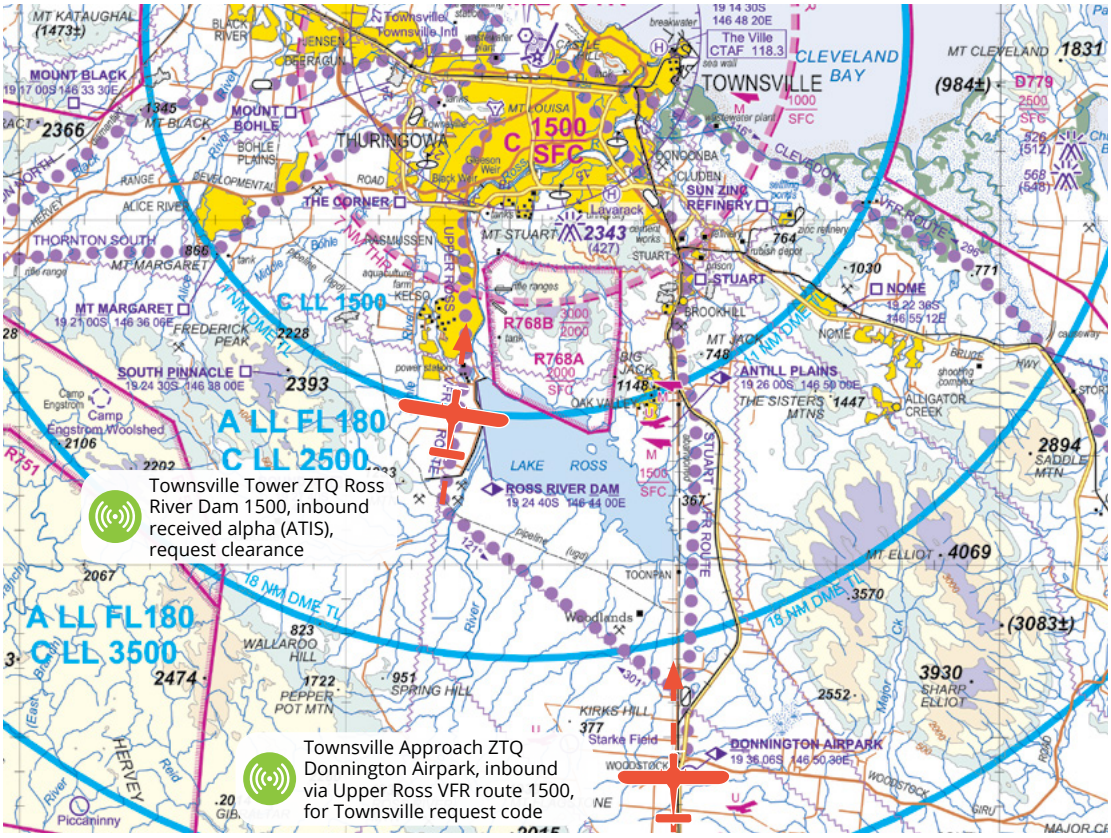
- Track mouth of the Bohle River (MBHR), west of Rattlesnake Island (RKI), to Palm Island.
- Level will be as cleared by ATC.
- When R747 is active, expect an amended route clearance.



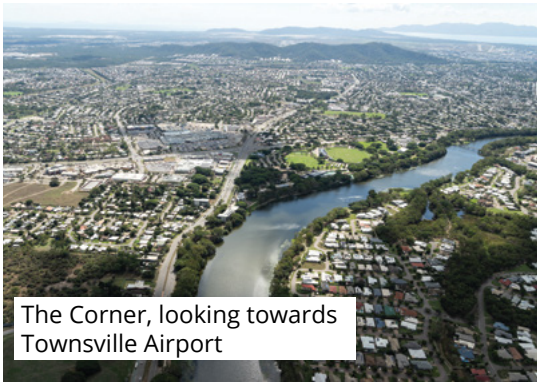


Arrival and tracking – from the south

When arriving from the south into Townsville, think ahead, pass your flight details and obtain your SSR code from Townsville Delivery on 128.1 in plenty of time prior to requesting airways clearance. Expect height requirements until approximately 6 nm or to remain north or west of the Ross River from the waypoint of Ross River Dam (RRDM).



Upper Ross VFR route inbound showing solar farm and Ross River dam



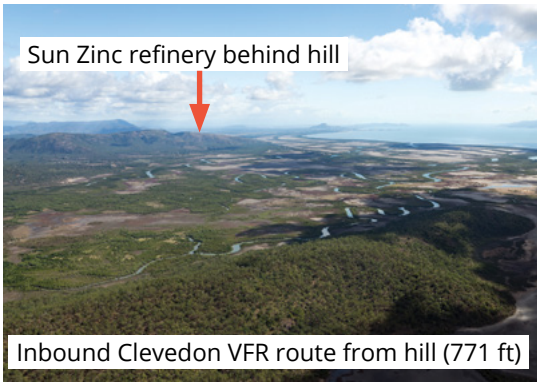
The Corner, looking towards Townsville Airport

Arrival and tracking – from the east

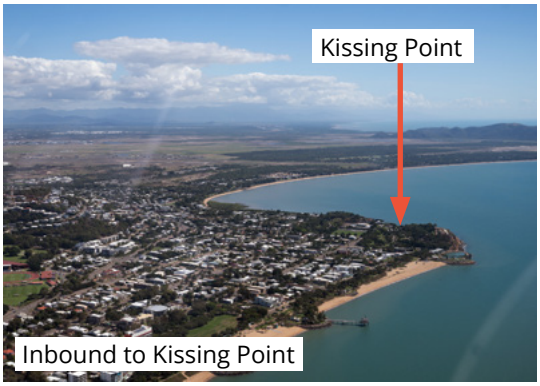
When arriving from the east into Townsville, think ahead, pass your flight details and obtain your SSR code from Townsville Delivery on 128.1 in plenty of time prior to requesting airways clearance. Follow ATC clearance instructions and be familiar with the Clevedon VFR route, township of Nome and Sun Zinc (SUNZ) refinery.

The locations of Kissing Point and The Lakes are used as clearance limits for helicopter arrivals from the east which are dependent on the runway in use. These clearance limits are required to be read back. Be mindful that you cannot proceed past these clearance limits until issued an ATC instruction to do so.


Inbound to The Lakes, adjacent to Castle Hill



Inbound Clevedon VFR route from hill (771 ft)

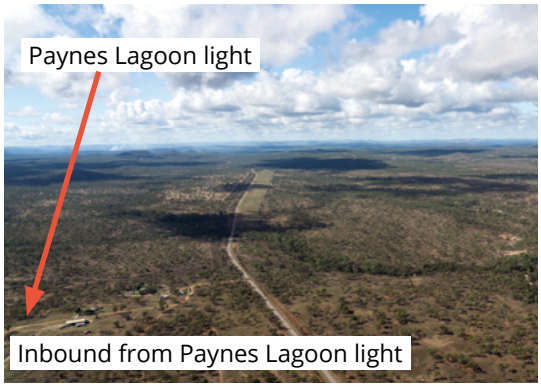


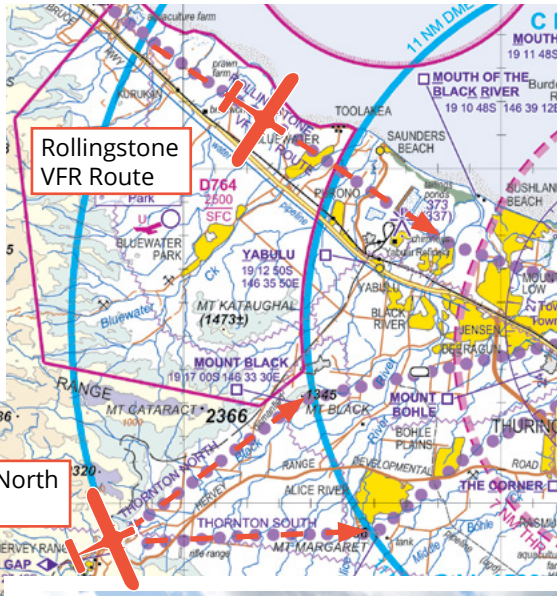
Inbound to Kissing Point

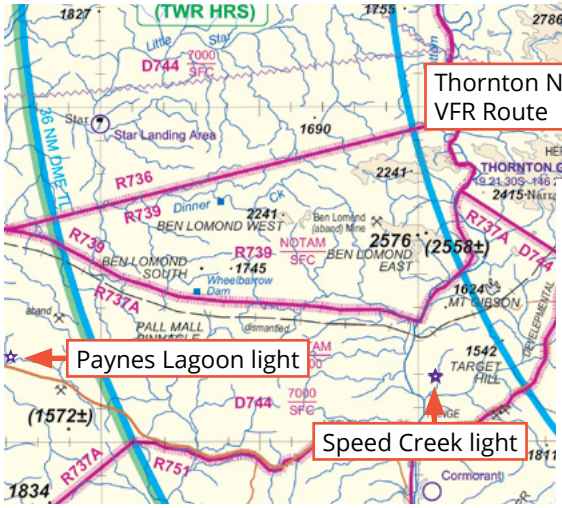
Arrival and tracking – from the west

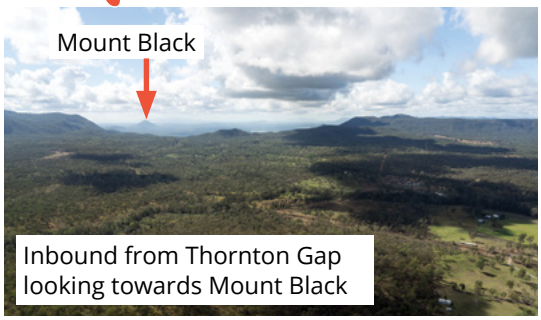
When arriving from the west of Townsville, think ahead, pass your flight details and obtain your SSR code from Townsville Delivery on 128.1 in plenty of time prior to requesting airways clearance. Observing the following instructions will assist you to remain clear of military restricted areas:

- When R736 and R739 are active, track slightly to the south of Greenvale and follow the dismantled Yabulu railway line to Thornton Gap (TNP). Follow ATC instructions which may be to track via the Thornton South or Thorton North VFR route.
- When R751 and/or R752 are active, track north of Hervey Range Development Road. Follow ATC clearance instructions. If unfamiliar, advise ATC.
- When R736, R739, R751 and R752 are active simultaneously, track south of Greenvale and follow the dismantled Yabulu railway line. Use the navigation lights at Paynes Lagoon and Speed Creek (12 nm tracking 083 from Paynes Lagoon) to keep you north of the Hervey Range Development Road, onto Thorntons Gap (TNP). Follow ATC instructions and if unfamiliar, advise ATC.
- If tracking inbound via the Rollingstone VFR Route; from Rollingstone, track between the Bruce Highway and the coast passing abeam Toomulla (TOOU), over Bluewater township to the chimneys at Yubulu refinery. Follow ATC instructions and advise ATC if unfamiliar.









Weather

Dark clouds over the Cairns region

Weather about the Cairns region

The Great Dividing Range creates 2 distinct climatic regions:

- **The North Tropical Coast** to the east, has extended warm and humid wet seasons with a mix of intense showers and thunderstorms, while the winter months can still bring showery weather in the south-easterly trade flow.
- **The Atherton Tablelands** on and to the west and south of the ranges, has a cooler, drier climate with cold winter days, while thunderstorms are prevalent during the wet season.

Winds:

- The prevailing wind is south-easterly for most of the year and can be strong and gusty, especially during the cooler months.
- An afternoon north-easterly sea breeze of 8 to 12 knots develops on many days throughout the year, with the onset typically between 10 am and 11 am.

  The strongest sea breezes occur during spring and summer and can reach 17 to 18 knots. A north-easterly 12 knots or more at around 060 degrees magnetic can cause crosswind issues.
- Katabatic or drainage winds, from the south to south-west at 5 to 8 knots, often affect the coastal plain during the evening and early morning hours.

  Note: Cairns Airport usually has a southerly katabatic wind direction but, due to the location of the anemometer (west of the runway), it usually reports a south-easterly. The wind direction is important because smoke from the Tablelands can get to Cairns and cause visibility problems, especially in the evening and overnight.
- Strong downslope west or south-westerly winds occur across parts of the North Tropical Coast when tropical cyclones or lows cross the coast well north or south of Cairns. Due to the location of Cairns Airport and orientation of the ranges to the west, these downslope winds are more evident to the north of the aerodrome and can cause significant undershoot.

Thunderstorms:

- Thunderstorms occur at any time of the year but are most common from October to April.
- Most thunderstorms form on the higher ground along and west of the ranges. They need at least 15 to 20 knots of west to south-west steering wind (i.e. the winds from 7,000 to 18,000 ft) to reach the coast. If the steering winds are less than this, the storms usually collapse as they move off the ranges and encounter the north-easterly sea breeze along the coastal plain, preventing them from reaching the coast.
- Storms can form in situ when there are weak steering winds or sea breeze convergence near the coast (outflows from inland storms and sea breeze boundary) after sunset, especially over the water.
- A strong south-easterly surge moving into an unstable environment along the coast or coastal trough can also trigger storms.
- A deep moist northerly flow in the wet season can cause overnight storms.
- Rare thunderstorm activity can also occur just after sunset to the south of Cairns. This is the result of winds from collapsed thunderstorms converging with the drainage wind from down the Gillies Highway.
- Tropical cyclones/lows and monsoonal bursts trigger storms over the region.

Turbulence:

- Turbulence occurs mostly in a strong west to south-westerly wind, with moderate to severe turbulence and mountain waves possible in the lee of the ranges. This can also cause undershoot wind shear on final approach to Cairns Airport from the north.
- Moderate turbulence occurs in a south-easterly flow at aerodromes located on the lee of the ranges. Due to the orientation of the coast and location of Cairns Airport, a south-easterly wind regime does not cause turbulence as the ranges are located to the west.
- Severe turbulence occurs in the vicinity of tropical cyclones or lows.

Low cloud: Broken low cloud occurs in a variety of situations. Look for cloud on nearby hills and ranges or areas of high moisture content (nearby river systems/creeks/lakes and the dense rainforest) associated with the following weather scenarios:

- Deep northerly wind regime with high dew point temperatures
- South-easterly stream showers (heavier when winds turn northerly with height)
- North-west cloud bands and post rain
- Nearby tropical cyclones/lows or coastal troughs.

Fog: Fog is most common during the cooler months but can occur at any time of the year, especially about the Tablelands:

- Most fog is isolated and shallow.
- Fog is extremely rare over Cairns Airport, but on occasions may report insignificant very shallow fog over the aerodrome, compared to more fog-prone aerodromes such as Mareeba, Atherton and Innisfail.
- Fog cessation mostly happens at sunrise, however, in the dry season it can persist a little longer.

Showers: Being in the tropics, this region is no stranger to showers and rain:

- South-easterly trade showers are common in this region all year round. The extent of stream showers is usually diurnal, peaking overnight and early morning. Due to the topography and coastal orientation, these showers are more significant in areas exposed to the south-east wind regime and nearby ranges, such as the Cassowary Coast about Babinda and Innisfail.
- Showers and rain are stronger, gustier and more persistent when an upper trough is present, or when the monsoon trough lies nearby.
- Drizzle is associated with a weak northerly flow of moderate depth.

Weather about the Townsville region

The wet and dry seasons in the greater Townsville region are sporadic and highly variable from year to year. This is due to a strong dependence on brief climate drivers, such as tropical cyclones, monsoonal outbreaks and the ENSO cycle (El Nino and Southern Oscillation cycle). The coastline's almost east-west orientation and mostly flat coastal terrain results in a semi-dry climate, except on the Paluma Range to the north-west and along the Bruce Highway north of Rollingstone where more tropical conditions are experienced.

Winds: The predominant wind flow is from the south-east. A typical 13 to 18 knot north-easterly sea breeze develops on many days throughout the year:

- The strongest sea breeze occurs during late spring and summer and can reach 20 to 25 knots.
- Sea breeze onset usually occurs around 00 UTC to 01 UTC but can be delayed or negated with a strong south-east gradient wind (at 3,000 ft), a strong south/south-west flow, or during overcast rainy days.

Thunderstorms: Thunderstorms are common in the Townsville region. They can occur at anytime of the year but are more frequent from October to April. Likely thunderstorm scenarios for the Townsville area include:

- Development about the ranges to the west of Townsville during the afternoon. If the steering winds (i.e. the winds between 7,000 to 18,000 ft) are from the west or south-west and stronger than 15 knots, these storms can reach the coast. If the steering winds are lighter, the storms tend to collapse once they move off the ranges into the sea breeze and may struggle to reach the coast.
- Once the sea breeze eases during the early evening, outflow from inland storms may trigger storms along or near the coast.
- Tropical cyclones/lows and monsoonal flows.
- South-east wind surge along the coast moving into an unstable environment.

Turbulence: Moderate turbulence occurs mostly in the following situations:

- Strong westerly winds produce mechanical turbulence on and in the lee of the ranges to the west of the airport.
- On and in the lee of Mount Stuart (6 km south of the airport) in a strong south-east to easterly flow.
- Wind shear overnight in a strong south/south-westerly wind flow with light winds at the surface due to a strong inversion.
- Severe turbulence associated with a tropical cyclone, regardless of wind direction, and can also occur in a very strong west to south-westerly flow due to interaction with the topography.

Low Cloud: Broken low cloud with precipitation develops mostly in:

- a deep north-easterly wind regime
- tropical cyclones
- north-west cloud bands
- inland/coastal trough movement during the wet season.

Low clouds without precipitation mostly occur in spring into early summer, with cloud bases mostly between 1,200 and 1,800 ft.

Fog: Fog can occur at any time of the year but is most significant during the cooler months and after rain. Most fogs are usually shallow, isolated and short-lived, however, in certain conditions, fog can be deeper and persist longer into the mid-morning.

Showers: Due to the orientation of the coastline, south-easterly trade showers tend to be much less frequent than on other exposed coastal areas further to the north and south of Townsville, although afternoon showers to the south-east of Townsville may drift into the area in a weakening mode and cause a short reduction in visibility. Heavy showers may persist longer in a deeper east or north-easterly air flow.

Severe Weather: Tropical cyclones can occur during the wet season and bring significant hazards, including:

- severe turbulence with very strong winds
- severe icing
- long-lasting low visibility and low cloud
- thunderstorms and possible tornadoes.

During the wet season, the monsoon trough occasionally moves southwards into the area. This brings long-lasting rain and squally showers, flooding and reductions in visibility and cloud base.

Radio use at CTAFs

Calls recommended ALL the time

Situation	Example broadcast
1. Before take-off or during taxi	Mareeba traffic, C172, ZTQ taxiing runway 10 for Cairns, Mareeba.
2. Inbound at least 10 nm from the aerodrome or further for high performance aircraft or busy aerodromes	Atherton traffic, C172, ZTQ one zero miles north inbound 1,500, estimating circuit at two five, Atherton.
3. Overflying or in the vicinity of a non-controlled aerodrome, but not landing, or further for high performance aircraft	Bluewater Park traffic, C172, ZTQ one zero miles south 1,500, overflying, estimating overhead two five, Bluewater Park.

Calls when there is OTHER TRAFFIC

Situation	Example broadcast
4. Entering a runway	Atherton traffic, C172, ZTQ lining up 33, Atherton.
5. Joining the circuit	Bluewater Park traffic, C172, ZTQ joining crosswind, runway 20R, Bluewater Park.
6. Making a straight-in approach, not less than 3 nm from the touch-down threshold*	Atherton traffic, C172, ZTQ joining 3 nm final, straight-in approach runway 15, Atherton.
7. Joining on base leg	Mareeba traffic, C172, ZTQ joining base, runway 28, Mareeba.
8. During an instrument approach, either when established at the final approach fix, or when commencing the missed approach	Mareeba traffic, C172, ZTQ conducting missed approach, runway 10, tracking to the southeast, climbing 4000, Mareeba.
9. Once clear of the runway(s)	Mareeba traffic, C172, ZTQ runway 10 vacated, Mareeba.

*Pilots should be aware that an instrument indication of 3 nm from an aerodrome may not be 3 nm to the runway threshold.

Frequencies & Phone Numbers – Cairns

Location	Frequencies	Contact Number
Cairns ATIS	**131.1, VOR 113.0**	**07 4050 5311**
Cairns Clearance Delivery	**128.75**	
Cairns Ground	**121.7**	
Cairns Tower	**124.9**	**1300 353 170 or 07 3866 3533**
Cairns APP/DEP	**118.4**	
Cairns APP / FIA	**126.1**	
CENSAR		**1800 814 931**

Frequencies & Phone Numbers – Townsville

Location	Frequencies	Contact Number
Townsville ATIS	**133.5, VOR 114.1, NDB 276**	**07 4752 1216**
Townsville Clearance Delivery	**128.1**	
Townsville Ground (aircraft)	**121.8**	
Townsville Ground (vehicles)	**119.45**	
Townsville Tower	**118.3 (NDB 276 transmits voice to aircraft with COM failure)**	**07 4752 1205**
Townsville APP/DEP	**126.8 primary, 134.1 secondary. (NDB 276 transmits voice to aircraft with COM failure)**	**07 4752 1207**
Brisbane Centre on ground outside of TWR HRs	**120.55**	
CENSAR		**1800 814 931**

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