



Flight Information Handbook Australia

AD2 Supplement Townsville (YBTL)

Version 5

Effective 27 November 2025

Approved: CO 452SQN

Change summary

Flight Information Handbook Australia AD Supplement Townsville (YBTL)

Version 5.0: Effective 27 November 2025

Location of change	Change description
Various	Grammatical and formatting changes throughout
Various	As per AIP SUP H165/25 R737ABCD amended to R738ABCD at new positions. R738EFGH added. D744 amended to D745
2.4.1	Amended section to including SQN SSR code for visiting SQNs conducting local flying ops as desired
2.4.2	Added section stating requirement for flight planning. Subsequent sections renumbered
2.4.3	Section removed. Content absorbed into 2.4.1/2.4.2
2.4.4	Section amended. NOTAMs for low jet routes must be activated by responsible flying squadron
2.6	Chapter removed due flight category procedures per extant OIP. Subsequent chapters renumbered
3.2.1	Section amended to clarify that an Alerting Service is also provided
3.2.2	Section reworded for clarity. Nil change to intent
3.6.3.7	Airspace gate 'SAMBA' added. Figure 3.1 updated
3.6.9.2	Figure 3.2 updated
4.2.1.1	Table 4.1 amended for consistency with YBTL ERSAs and Aircraft Pavement Strength Evaluation Manual. TWY G2 pavement concession available to KC-30A per caveat 4
4.6.1	Section amended to remove excess wording. Nil change to intent
5.3.9.1	List points amended to include ACFT heading and altitude in the case of pre-meditated ejection
6.3.2	Section amended to clarify only formation fast jets on departure are approved automatic frequency transfer from TWR to APP
6.4.1.a)	SID numeric designators replaced with 'X' to reduce update burden with DAP changes
6.4.3	Section added. States fast jet formation departure requirements for separation with other aircraft
6.5.1.4	Clause removed as ATIS again references weather vice TMP. Subsequent clause renumbered
7.6.2	Section removed. Pad West no longer available to civilian users
8.3	Version number added to plate for document control

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1 Introduction

1.1 Introduction

This Flight Information Handbook Australia (FIHA) AD2 Supplement (SUPP) Townsville (YBTL) is deemed Electronic Aeronautical Information (EAI) and is made available for Electronic Flight Book (EFB) use via the Defence Aeronautical Information Service Provider (AISP) AIS-AF.

This FIHA AD2 SUPP ensures compliance with Defence Aviation Safety Regulations (DASR) AO.GEN.05 – Management of Orders, Information and Publication (OIP) and DASR.SRoA – *Standard Rules of the Air* by providing useable, current, portable and correctly authorised procedures that support flying operations within the specified area of operations.

1.2 Scope

This instruction applies to the conduct of flying operations and control services at YBTL aerodrome and associated airspace. These procedures apply to locally based aircraft, or transiting aircraft that advised they are familiar with this AD2 SUPP.

1.3 Authority

The authority for this FIHA AD2 SUPP is [AC SI \(OPS\) 01-20](#) Aeronautical Information Management.

Approval authority: CO 452 SQN

Sponsor: FLTCDR 452SQN TVL FLT

Endorsement authority:

- a) CO 5AVN
- b) 81 WG STANDO
- c) 82 WG STANDO

Airspace control authority: FLTCDR 452SQN TVL FLT

1.4 Definitions

The terms used in this AD2 SUPP are defined in the Defence Aviation Safety Regulations – Glossary and Australian Defence Glossary (aviation context). Where terms are specific to this AD2 SUPP only, they are identified within this document.

All levels referred to in this AD2 SUPP are in feet AMSL, unless otherwise specified. Locally briefed aircraft are considered to be an aircraft operated by:

- a) 5 AVN REGT
- b) a visiting SQN or ADF contractor after receiving a local ATC procedures brief.

The term 'fast jet' includes the following aircraft types, including all variants unless specifically mentioned otherwise:

- a) F15
- b) F16
- c) F18
- d) F22
- e) F35
- f) Hawk

The term 'C2 agency' refers to any authorised military command and control agency, other than ATC, providing aircraft control. This may include:

- a) GCI/CRU
- b) TACP
- c) ASOC
- d) AEWG
- e) JTAC/FAC (A)
- f) Naval ships

1.5 Applicability

These procedures apply to locally based aircraft, or transiting aircraft that advise they are familiar with this AD2 SUPP. If necessary, transient aircraft may request a local area briefing to be arranged by the AD2 SUPP Sponsor. Any other aircraft are assumed non-compliant. Aircraft may also opt-out of the application of these procedures by advising ATC.

1.6 Content

This AD2 SUPP applies to the conduct of flying operations and ATC services at YBTL aerodrome and the aerodrome's supporting airspace. Information contained in this instruction that may have civil application or enhance overall useability is also provided in the YBTL section of Enroute Supplement Australia (ERSA).

This AD2 SUPP is suited for EFB use and is broken into the following parts and sections

- a) [General Planning](#)
- b) [Airspace](#)
- c) [Aerodrome](#)
- d) [Abnormal Operations](#)
- e) [Departures & Arrivals](#)
- f) [Circuit Area](#)
- g) [Annex](#)

2 General Planning

2.1 ATC Support

- 2.1.1 Air Traffic Services (ATS) hours are 2000-1200z daily or as amended by NOTAM.
- 2.1.2 Full ATS support capable of supporting fast jet flying, circuits (CCT) and instrument approach training (IAT) are available between 2100-0700z Mon-Fri (excluding public holidays). Limited CCT and/or IAT is available between 0800-1200z Mon-Fri and 2200-0700z Sat-Sun with 24 hours prior notice. Outside of these times, CCT and/or IAT will generally not be available.
- 2.1.3 Requests for extended/additional ATS support may be available as per below:
- a) Short duration (less than 1hr) extension of ATS hours to support an arrival or departure – minimum 48 hrs prior notice to 452sqntvflft.opscdr@defence.gov.au or 07 4422 8109
 - b) Fast jet flying (excluding transit flights) outside 2100-0700z Mon-Fri (excluding public holidays) – minimum one month prior notice to 452sqntvflft.opscdr@defence.gov.au

2.2 Visiting Squadrons

- 2.2.1 Regardless of the ATS support required, visiting SQNs planning an activity or exercise based out of Townsville are to contact 452sqntvflft.opscdr@defence.gov.au early in the planning cycle to assist with the development of local procedures for the conduct of the activity and coordinate a local procedures briefing.

2.3 Aerodrome Services

- 2.3.1 **Aerodrome Rescue and Firefighting Services (ARFF).** ARFF CAT 7 is provided H24. Requests for higher ARFF levels (CAT 8) shall be requested through TVL ABOC (Airbase Operations Centre) (tvf.aboc@defence.gov.au) or 07 4752 1888 outside of business hours with at least 72 hrs prior notice.
- 2.3.2 **Aircraft Arrestor System (AAS).** BAK 12/14 hook-cable is installed 445m from the threshold of RWY 01 (southern threshold). The hook-cable is bolted down (not available) except with two hrs prior notice during Cable Party hours (2130- 0630z Mon-Thu and 2130-0400z Fri) or 24 hrs notice out of hours. Requests are to be directed to TVL ABOC (tvf.aboc@defence.gov.au) or 07 4752 1888. There is no northern hook-cable.

2.4 Flight Planning

- 2.4.1 Visiting SQNs conducting local flying must submit their daily flying program (FLYPRO) no later than 1600K on the preceding day to 452SQN TVL FLT (tvf.atc@defence.gov.au) and TVL ABOC (tvf.aboc@defence.gov.au). FLYPRO should contain SQN SSR codes for each formation if these are intended to be utilised.
- 2.4.2 All aircraft operating to/from YBTL, including to Restricted Airspace are required to Flight Plan (FLTPLN). Where FLTPLN are not submitted, expect delays. Flights remaining within TVL CTA and/or Restricted Airspace need only include rudimentary information and may be on templates or contain 'dummy' data, provided a FLYPRO is submitted.
- 2.4.3 Flight plans (FLTPLN) to/from YBTL must not be submitted more than 20 hrs prior to EOBT to allow ATC system data processing.
- 2.4.4 Low Jet Routes. Low-level fast jet sorties require a low jet route NOTAM, to be submitted by the responsible flying SQN.
- 2.4.5 CCT and IAT Booking. Aircraft conducting air-work within TVL Control Zone (CTR) and Control Area (CTA), including survey (SVY), IAT, or CCT training must contact ATC for approval and slot time. Operators are to book using the online booking website: www.qld.bookawk.com. For operations within R736, R739 and or R751 an 'Air Activity Request' is to be submitted to Range Control dotam.rangecontrol.tfta@defence.gov.au. If unable to book online, operators are to contact TVL ATC or Range Control on the following numbers:
- a) CTA AWK (APP): 07 4752 1207
 - b) CTR AWK (TWR): 07 4752 1205.
 - c) TFTA High Range Control: 07 4775 8500

2.5 Speed Restrictions

- 2.5.1 FIHA advises airspace speed limitations do not apply to State aircraft or authorised operators except as specified in ERSA. Effective traffic management at YBTL requires speed control to ensure safety and efficiency. All aircraft on a published SID or STAR must comply with the published speed restrictions.

2.5.2 As specified in YBTL ERSA, unless a higher speed is operationally required the following speeds apply:

- a) When not on a SID or STAR (including vectoring) non-fighter aircraft arriving or departing YBTL must not exceed 250KT IAS when below 10,000FT AMSL. Advise ATC if a higher speed is operationally required.
- b) Arriving fighter aircraft must not exceed 350KT IAS when within 36NM of YBTL, unless otherwise directed by ATC.

2.6 Altimeter & Transponder

2.6.1 Altimetry procedures. Aircraft operating in TVL domestic airspace at altitudes are to set local QNH as advised by ATC and/or ATIS broadcast.

2.6.2 Transponder procedures. Formation transponder procedures as per FIHA.

2.7 External Lighting on NVD

2.7.1 Military aircraft may conduct NVD operations within 50NM of YBTL SFC – 1,000FT without displaying external lighting. Outside ATS hours military aircraft should display external lighting on receipt of a CTAF broadcast from another aircraft.

2.8 TVL TACAN

2.8.1 The TACAN experiences terrain shielding between 140R and 160R beyond 25NM at MSA.

2.8.2 The TACAN is not paired with or co-located with TL VOR/DME, and is therefore not to be used with any SIDs, ILS, DME or VOR approaches.

2.9 Visual Tracking Points

2.9.1 Familiarity with the listed visual tracking points will assist traffic management and may expedite low level clearances:

- a) Cape Cleveland Lighthouse (CCL)
- b) Castle Hill YBTL 090/2
- c) Kissing Point (KSPT)
- d) Mount Black (MBC)
- e) Mount Margaret (MMT)

- f) Mouth of the Black River (MBKR)
- g) Mouth of the Bohle River (MBHR)
- h) Mouth of the Ross River (IVO TVL Port)
- i) Orchard Rocks (ORKS)
- j) Rattlesnake Island (RKI)
- k) Ross River Dam (RRDM)
- l) Sun Zinc Refinery (SUNZ)
- m) The Lakes, YBTL 127R/1.4NM
- n) Thornton Gap (TNP)
- o) West Point (WEP).

2.10 Class G Airspace High Traffic Areas

- 2.10.1 Light fixed-wing aircraft conduct flights between YBTL and Palm Island (YPAM) frequently throughout daylight hours SFC – 4,000FT.
- 2.10.2 D779 (Cape Cleveland Training Area) is frequented by civil trainee helicopters and fixed wing aircraft during daylight hours, generally SFC – 1,500FT.
- 2.10.3 D764 (Bluewater Training Area) is frequented by civil trainee helicopters and fixed wing aircraft during daylight hours, generally SFC-2,500FT.
- 2.10.4 Military helicopters conduct flights between YBTL and TFTA frequently throughout the day and night, generally SFC – 2,500FT.

3 Airspace

3.1 Airspace

- 3.1.1 This AD2 SUPP provides specific local airspace information that supports the airspace information in ERSA FAC, Designated Airspace Handbook (DAH) and relevant aeronautical information charts.

3.2 Domestic Airspace

- 3.2.1 During ATS hours, TVL CTR and TVL CTA as defined in DAH is administered by TVL ATC. TVL APP also provides a Flight Information Service (FIS) and Alerting Service inside Class G airspace within 36DME TL.
- 3.2.2 Outside of TVL ATS hours the TVL CTR and TVL CTA steps are not active below 8,500 FT.
- 3.2.3 Air Traffic Control (ATC) may recall YBTL airspace at short notice and will provide notification in the form of an airspace NOTAM and/or ATIS broadcast.

3.3 North Eastern Training Area

- 3.3.1 The NETA is an IFR training area, defined as TL 025-080 VOR radials, 10-30DME. Entry and exit gates are runway dependent:
 - a) RWY01 – Entry Gate: KAGES, Exit Gate: REGIN
 - b) RWY19 – Entry Gate: REGIN, Exit Gate: KAGES
- 3.3.2 Levels available are generally 7,000FT to FL180.

3.4 D764 Bluewater Training Area

- 3.4.1 D764 is commonly used by civilian rotary and fixed wing training aircraft.
- 3.4.2 Aircraft should expect a 'BLUEWATER' clearance via the applicable runway specific tracking listed below. A 'BLUEWATER' clearance allows an aircraft to operate within the lateral confines of D764 not above the cleared level.
 - a) RWY01:
 - i. Outbound: BLUEWATER via the Coast
 - ii. Inbound: YBTL via YBU
 - b) RWY19:
 - i. Outbound: YBU DCT
 - ii. Inbound: YBTL via the Coast
- 3.4.3 Awareness. Aircraft operating D764 within Class C airspace must monitor APP FREQ. When transiting between Class C and Class G airspace, pilots should monitor 126.7 to ensure appropriate situational awareness is maintained with respect to operations in Class G airspace within the confines of D764.

3.5 D779 Cape Cleveland Training Area

- 3.5.1 D779 is commonly used by civilian rotary and fixed wing aircraft. Aircraft operating in D779 should monitor 126.05 to ensure appropriate situational awareness is maintained with respect to operations in Class G airspace within the confines of D779.
- 3.5.2 Tracking to/from D779 is runway dependent. Standard clearances are:
- a) RWY01:
 - i. Outbound: Coastal Southbound not above 1,500FT
 - ii. Inbound: TVL via SUNZ, not above 1,500FT, clearance limit 'The Lakes'
 - b) RWY19:
 - i. Outbound: SUNZ DCT, not above 1,500FT
 - ii. Inbound: YTBL via the Coast, not above 1,500FT, clearance limit KSPT

3.6 Special Use Airspace

3.6.1 Townsville Restricted Areas (RA)

- 3.6.1.1 Townsville Field Training Area (TFTA). TFTA airspace is defined as:

- a) R751 'High Range' – SFC – NOTAM
- b) R752 'High Range' – SFC – NOTAM
- c) R736 'Star' – SFC-NOTAM
- d) R739 'Star' – SFC – NOTAM
- e) R738A/B/C/D/E/F 'Land' – 7,000FT – NOTAM
- f) R738G/H 'Land' – FL120 - NOTAM
- g) D745 – SFC- 7,000FT

- 3.6.1.2 Mount Stuart Training Area (MSTA). MSTA airspace includes:

- a) R768A – SFC-2,000FT (2100-1200z Daily EXC PH)
- b) R768B – 2,000FT-3,000FT (activated via NOTAM)

- 3.6.1.3 Other Townsville RA:

- a) R747 'Rattlesnake Island' – SFC – NOTAM
- b) R732 'Greenvale Training Area' – SFC – NOTAM

3.6.2 **Military Operating Areas (MOA)**

3.6.2.1 In accordance with DAH, 452SQN TVL FLT administer the below MOA:

- a) M742 'Tiger' – 4,000FT – FL240

3.6.3 **General Information**

3.6.3.1 Supersonic Flight. The areas approved for supersonic flight are:

- a) Overwater (primary): M742 outside 30DME TL
- b) Overland:
 - i. Primary. R738ABCDEFGH
 - ii. Secondary. R736, R739, R751, R752 may be used for supersonic flight if R738ABCDEFGH is not deemed appropriate to achieve the mission.

3.6.3.2 The following supersonic flight restrictions apply:

- a) Use caution, D745 is widely used by helicopter stock grazing operations and for other general aviation purposes which run concurrently with TVL Land operations.
- b) TFTA borders on higher density built up areas, apply the maximum possible avoidance buffers.

3.6.3.3 **Restricted Airspace Bookings.** TFTA (excluding R738) and MSTA airspace bookings are coordinated through the relevant RCO to ensure activities are de-conflicted with any live firing activities. R738 or M742 booking requests and enquiries must be emailed to tvl.atc@defence.gov.au and 452sqntvlflt.notam@defence.gov.au NLT 48 hours prior to the requested activation time. Where it is not possible to provide sufficient notice, the email request should be accompanied by a phone call to 07 4752 1207.

3.6.3.4 **Airspace Expiration.** RA automatically reverts to the extant airspace marked on aeronautical charts at the NOTAM expiration time. Short notice (less than 24 hours' notice) extensions are generally not available. All activities must be completed and aircraft vacated RA prior to the NOTAM expiration time. Aircraft that are required to operate outside of exercise airspace activation times may do so, subject to extant Aeronautical Information Publication (AIP) airspace priorities and flight planning requirements.

3.6.3.5 **ATS within RA.** Unless specified by ATC, ATS are not provided to aircraft within RA. Identification will be automatically terminated on approval to change frequency. Aircraft may nominate 'OPS NORMAL' or 'SARTIMES' with tac C2 or ATC.

3.6.3.6 **Airspace Buffers.** The vertical limits of RA are usable levels by non-participating aircraft. Airspace users are to ensure they apply the appropriate buffers to the published airspace limits/levels.

3.6.3.7 **Airspace Gates.** The following gates are used for transit to/from TVL RA (Refer to figure 3.1):

Name	Bearing (TL VOR)	Latitude/Longitude
SALSA	TL225R019	19 26.1714S 146 29.4479E
SIERRA	TL270R030	19 10.4611S 146 14.1637E
TANGO	TL280R040	19 02.2116S 146 05.4023E
THORNTON GAP	TL240R018	19 21.5000S 146 27.7000E
JOCKO	TL230R016	19 23.0000S 146 31.0000E
REGIN	TL070R025	19 09.1591S 147 11.3567E
KAGES	TL040R025	18 57.6607S 147 04.9975E
SAMBA	TL190R037	19 50.6773S 146 33.9437E



3.6.4.1 M742 is primarily used for fast jet training, maintenance test flights and pax flights.

3.6.4.3 Airspace Gates. Aircraft tracking is runway dependent:

- ### 3.6.5 R747 Rattlesnake Island

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3.6.5.2 Upon activation, R747 will automatically be administered by 452SQN TVL FLT. Units are to contact TVL APR on 07 4752 1207 to obtain an airspace release prior to commencing operations.

3.6.5.3 On completion of operations, units are to contact TVL APR on 07 4752 1207 to release airspace.

3.6.5.4 When not operating in support of a ground unit, aircraft operating in R747 must monitor TVL APR on guard.

3.6.6 **R768A/B Mount Stuart**

3.6.6.1 R768 is administered by RCO MSTA.

3.6.6.2 Flying Operations. R768 is published for non-flying activities only. Flying operations within the lateral confines of R768 are only available when R768 is de-active (via NOTAM or AIP listed public holidays).

3.6.6.3 Separation with R768A/B. Locally based aircraft must remain clear of R768A/B at all times. If operations are required within R768A/B, or the aircraft cannot remain clear, the pilot must advise ATC.

3.6.7 **Townsville Field Training Area**

3.6.7.1 TFTA is the primary range and associated airspace for the ADF to conduct air to air combat training, air to surface weapons, JTAC training, helicopter training and military rehearsals including live fire exercises.

3.6.7.2 Upon activation, R738 and D745 are automatically administered by 452SQN TVL FLT, unless otherwise coordinated. Upon activation, remaining TFTA airspace is automatically administered by TFTA Range Control, unless otherwise coordinated.

3.6.7.3 Restrictions on activation. TFTA RA is not to be activated for flying activities outside of TVL ATC hours except when:

- a) TFTA RA will be under the control of an appropriate control authority; and
- b) prior approval has been sought from TVL ATC.

3.6.7.4 **Airspace release process.** Nominated C2 agencies shall coordinate appropriate airspace releases from 425SQN TVL FLT prior to commencing operations. If portions of the exercise airspace are not required for extended periods, the airspace may be released back to 452SQN TVL FLT.

3.6.7.5 **Priority transit.** Where required, TVL ATC will coordinate with the relevant C2 agency to obtain clearance for priority aircraft to transit the airspace, and

advise an approximate duration for the delay. The C2 agency will then coordinate to impose vertical and lateral restrictions or a complete CHECK FIRE as directed from TVL ATC. The relevant C2 agency will contact TVL ATC when the required restrictions are established. TVL ATC will advise Range Control when the restrictions are no longer required. Priority transits are usually aircraft with emergency, MED, SAR or any other status considered by ATC to have priority over training activities.

- 3.6.7.6 **Check Fire.** For ATC/RSO/TACP coordination a 'Check Fire' is considered to check fire any live fires as well as any small/very small/micro UAS operations (as defined in DASR UAS) that are operating below 400FT AFL in the applicable airspace. Larger UAS (such as Integrator) cannot be landed quickly and will be de-conflicted between ATC and the applicable C2 agency.

3.6.8 Low Flying Areas (LFA)

- 3.6.8.1 Army helicopter LFAs are approved IAW table 3-208.1 of [SI\(AVN\) OPS 3-208](#).

3.6.9 ROZ Wedge

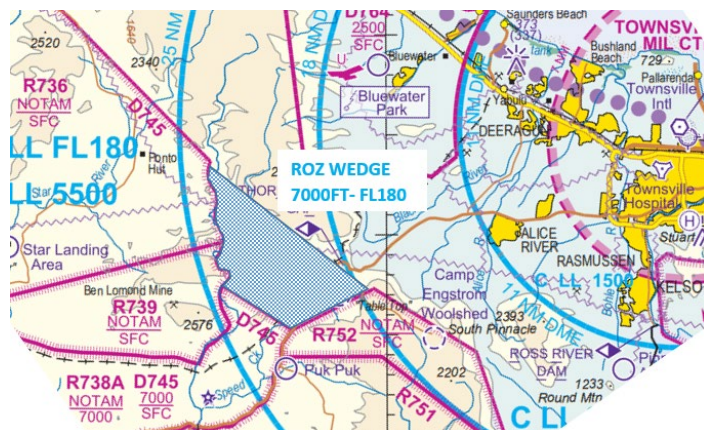
- 3.6.9.1 ROZ WEDGE is an airspace release established to allow transit between R752 and R736/R739.

- 3.6.9.2 ROZ WEDGE (refer to figure 3.2) has the following dimensions:

a) Lateral:

- i) 19 16 17S 146 20 43E (55K DU 31202 69014)
- ii) 19 22 42S 146 29 20E (55K DU 46328 57231)
- iii) 19 24 45S 146 25 00E (55K DU 38756 53426)
- iv) 19 22 34S 146 21 22E (55K DU 32383 57430) thence north along Keelbottom Creek to
- v) 19 16 17S 146 20 43E (55K DU 31202 69014)

- b) Vertical: 7,000FT to FL180 (8,000FT to 16,000FT usable)



(Figure 3.2)

3.6.9.3 The controlling C2 agency (or aircraft if no C2) shall coordinate ROZ WEDGE airspace releases from 452SQN TVL FLT prior to commencing operations. If ROZ WEDGE is not required, the airspace shall be released back to 452SQN TVL FLT at the earliest opportunity.

3.6.10 **ROZ Lavarack**

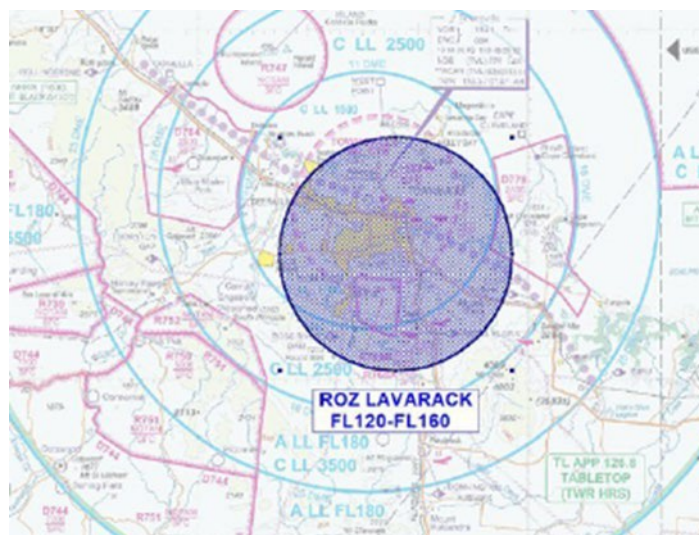
3.6.10.1 ROZ LAVARACK is a defined operating area within Townsville CTA for certain exercise serials overhead Lavarack Army Barracks.

3.6.10.2 ROZ LAVARACK (refer to Figure 3.3) has the following dimensions:

a) Lateral: a circle radius 10NM centre on Lavarack Barracks (19 19.27S 146 48.05E, 55K DU 79078 63623)

b) Vertical: FL120-FL160

- i) Lowest Usable Level (LUL): FL130
- ii) Highest Usable Level (HUL): FL150
- iii) Alternative levels may be available through ATC.



(Figure 3.3)

3.6.10.3 Aircraft operating in ROZ LAVARACK are to operate Military Authority Assumes Responsibility for Separation of Military Aircraft (MARSA) with other aircraft in ROZ LAVARACK and monitor Guard (243.0 MHz).

3.6.10.4 Aircraft not operating within ROZ LAVARACK will be separated from ROZ LAVARACK by ATC.

4 Aerodrome

4.1 General

4.1.1 Aerodrome Manual

4.1.1.1 The [YBTL Aerodrome Manual](#) provides general aerodrome information.

4.1.2 OLA Complex

4.1.2.1 The OLA complex is depicted at Figure 4.1 and is divided into three areas:

- a) Northern OLA (NOLA), which contains parking areas 1-5
- b) Southern OLA (SOLA), which contains parking areas 6-10
- c) Maritime OLA (MOLA), which contains parking areas 11-14



(Figure 4.1)

4.1.2.2 The NOLA and SOLA are suitable for parking fast jet aircraft or similar. The MOLA is suitable for parking large transport aircraft. MOLA 11 is the only OLA suitable for parking C5, P8 and C17 type aircraft.

4.1.2.3 ATC controls the OLA complex area for aircraft taxi movements. ABOC coordinates aircraft parking allocations and all other access requirements.

4.1.3 ERSA

[ERSA](#) provides general information and procedures about YBTL applicable to both civil and military operators.

4.2 Taxiways

4.2.1 Taxiway Restrictions and Exemptions

- 4.2.1.1 YBTL TWY restrictions are designed for civilian operations IAW the YBTL [ERSA FAC](#), however due to the varying design and requirements of military aircraft Table 4.1 details standing exemptions at YBTL. These exemptions apply to all variants of the aircraft from any nation. A pavement concession is only required if the aircraft will be operating above the relevant weight on the ground at YBTL. If an aircraft is not listed, refer to [ERSA](#) for TWY restrictions. For further information or enquiries contact 27 SQN ABOC tvf.aboc@defence.gov.au.

	B737 BBJ	C130	C-17A	C-27J	E7-A	F/A-18 F/G	F-35	Falcon 7X	KC- 30A MRTT	P-8A
TWY A4-A7	✓	✓	✓	✓	✓	✓	✓	✓	x	✓
TWY B	✓	✓	✓	✓	✓	✓	✓	✓	x	✓
TWY E1	✓ ¹	✓	x	✓	✓ ¹	✓	✓	✓	x	x
TWY E2	✓ ¹	✓	✓ ³	✓	✓ ¹	✓	✓	✓	x	✓ ²
TWY G1	✓	✓	✓	✓	✓	✓	✓	✓	x	✓
TWY G2	✓	✓	✓	✓	✓	✓	✓	✓	✓ ⁴	✓
TWY M	✓ ¹	✓	✓ ³	✓	✓ ¹	✓	✓	✓	x	✓ ²

1 – Pavement concession required if > 74t

2 – Pavement concession required if >72t

3 – Pavement concession required if >225t

4 – Pavement concession required at all masses

Table 4.1

- 4.2.1.2 Pilots are to ensure a pavement concession has been granted if required prior to taxi.

4.2.2 Civil Terminal Bay 1

Aircraft parked on the Civil Terminal Bay 1 (including wide bodied aircraft) must pushback behind Bay 2 using the pushback markings. Aircraft must not pushback through TWY K onto TWY A without ATC approval.

Note: Code D or larger aircraft must push back onto TWY Alpha, Ground will advise tail direction with pushback clearance.

4.3 Standard Taxi Routes

- 4.3.1 Ordnance Loading Areas (OLAs). To mitigate ATC's limited visibility of the OLA complex, taxi clearance requests must include the aircraft's OLA position.
- 4.3.2 To ensure flow efficiency, the following taxi routes apply:
- a) TWY V and TWY T movements must be in a clockwise direction.
 - b) RWY 01 departure:
 - i) NOLA: taxi via V – U2 – U1 – T – S – E2
 - ii) SOLA: taxi via T – S – E2
 - iii) MOLA: taxi via M – E2, unless C17 or similar then taxi via M – G2
 - c) RWY 01 arrival:
 - i) NOLA: taxi via W – V
 - ii) SOLA: taxi via W – V – U2 – U1 – T
 - iii) MOLA: taxi via G2 – M
 - d) RWY19 departure:
 - i) NOLA: taxi via V – W
 - ii) SOLA: taxi via T – U1 – U2 – V – W
 - iii) MOLA: taxi via M – G2
 - e) RWY19 arrival:
 - i) NOLA: taxi via E2 – T – U1 – U2 – V
 - ii) SOLA: taxi via E2 – S – T
 - iii) MOLA: taxi via E2 – M, unless C17 or similar then taxi via G2 – M.

4.4 Operational Readiness Platform (ORP)

- 4.4.1 The RWY 01/19 ORPs are not available while civilian aircraft are using the RWY. Pilots expecting to use the ORPs must contact ATC when flight planning and confirm with Ground on first contact.

4.5 Aircraft Arrestor Systems (AAS)

- 4.5.1 AAS procedures at YBTL are in accordance with FIHA. The Townsville Aerodrome Emergency Plan provides Base AAS response actions.
- 4.5.2 If an aircraft engages the cable, RWY 01/19 will be unusable for approximately 20-30 minutes. If an aircraft is planning to engage the cable, conditions permitting, ATC will endeavour to sequence that aircraft last.

4.6 Reduced Runway Separation Standards (RRSS)

- 4.6.1 RRSS are provided IAW FIHA. 81WG & 82 WG aircraft agree to the application of RRSS when the runway is wet.
- 4.6.2 Hot lane procedures. The COLD lane for RWY 01/19 is the left side of the runway in use.

4.7 RAAF TVL Demolition Range

- 4.7.1 The Demolition Range is comprised of an exclusion zone defined as a 400m radius of the point 19 14 54.2 S 146 45 08.2 E (261/0.74 NM from TVL ARP) up to 2000FT AMSL.



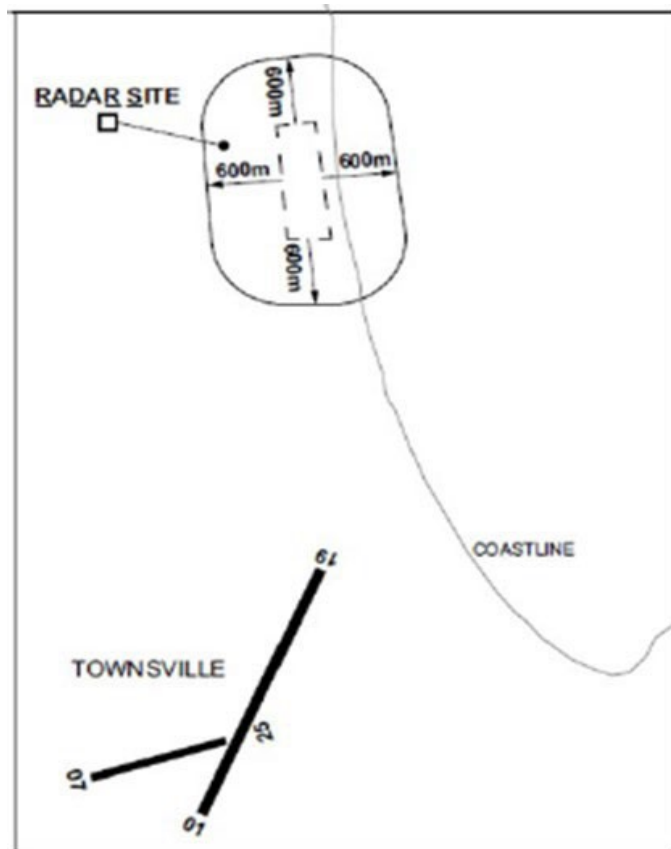
(Figure 4.2)

- 4.7.2 Demolitions are planned to have minimal impact on operations; however, should unsuccessful detonations require a soak time (expect an initial period of 10 – 30 mins followed by a second period of 10 – 60 mins), the following restrictions apply:
- a) Instrument approaches are not available
 - b) Left circuits to RWY 01 or RWY 07 are not available
 - c) Right circuits to RWY25 or RWY 19 are not available
 - d) Helicopters operating in Helo West, Pad West or the Town Common must remain clear of the demolition range.

- 4.7.3 ATC will advise if these restrictions are in place at the time of booking the TVL Circuit Area (CIRA) or IAP.

4.8 Noise Abatement Procedures

- 4.8.1 Aircraft departing RWY 01 or RWY 07 on a visual departure, including VFR, must remain at least 600m clear of Pallarenda built up areas below 2,000FT unless directed by ATC. This may be achieved as follows:
- a) YBCS/YPAM departure maintain upwind until over water then remain over water at least 600m clear of Pallarenda.
 - b) Westerly departures:
 - i) Conduct left turn remaining at least 600m south of Pallarenda; or
 - ii) Maintain upwind until over water then remain over water at least 600m clear of Pallarenda and conduct left turn north of VFR waypoint RDRS (the radar site, see figure 4.3) or when above 2,000FT.



(Figure 4.3)

- 4.8.2 Practice engine failures are not permitted on left crosswind RWY 01.

4.9 Bird Hazards

- 4.9.1 Bird hazards at YBTL exist up to 3,000FT, with high risk during the December to May seasonal period at dawn and dusk. Refer to the YBTL Aerodrome Manual for more detailed wildlife hazard information.

4.10 Aerodrome Charts

- 4.10.1 Charts that support YBTL include:
- a) WAC 3219
 - b) MIL AD Obstacle Chart Type A: RWY 01/19 and RWY 07/25 FEB 2024.

5 Abnormal Operations

5.1 Arming/De-arming

5.1.1 There are five Aircraft Safety Points (ASP) (see figure 5.1):

- a) ASP1 - Used for forward firing weapons, located within the runway strip and has a 100m safety radius. When in use, the safety radius area is restricted to mission essential personnel (MEP) arming aircraft. Any ordnance templates that cannot be contained within the Commonwealth property boundary are to have an endorsed EO safety case accepted by the applicable authority.
- b) ASP2 - Decommissioned.
- c) ASP3 - Used for forward firing weapons, located within the runway strip and has a 100m safety radius. When active, only the areas relevant to the Aircraft Weapon System Safety Template contained within the 100m projection hazard safety footprint must be restricted to MEP and arming aircraft. Any ordnance templates that cannot be contained within the Commonwealth property boundary are to have an endorsed EO safety case accepted by the applicable authority.
- d) ASP4 - May be utilised for non-forward firing ordnance and has a 100m safety radius. When in use, the safety radius area is restricted to MEP and arming aircraft.
- e) ASP 5 - For helicopter flares only and has a 100m safety radius. When in use, the safety radius area is restricted to MEP and arming aircraft.



(Figure 5.1)

- 5.1.2 Use of ASP1 or ASP3 closes RWY01/19 to civilian aircraft. Once aircraft are armed or de-armed, pilots must expedite take-off or taxi clear of the runway strip.

5.2 Forward Firing Procedures

- 5.2.1 Aircraft with forward firing ordnance must arm-de-arm IAW the following procedures:

- a) RWY01 departure. Taxi to ASP1 for arming. On completion conduct departure process without delay.
- b) RWY01 arrival. Taxi to ASP3 on RWY W to de-arm. On completion, taxi clear of the runway strip without delay.
- c) RWY19 departure. Taxi to ASP3 on TWY W. On completion conduct departure process without delay.
- d) RWY19 arrival. Taxi to ASP1 for de-arming. On completion, taxi clear of the runway strip without delay.

- 5.2.2 **Non-forward firing procedures.** Aircraft with non-forward firing ordnance must arm/de-arm IAW the following procedures:

- a) Departures. Arming procedures are specified in the RAAF Base Townsville Explosive Ordnance Safety Instruction.
- b) RWY 01 arrival. Taxi via TWY W and proceed to the designated OLA parking position. With prior notice and traffic permitting, ASP3 may be used to de-arm. If ASP3 will be used, the pilot must advise the SQN operations to alert ground crew to meet the aircraft and advise ATC this has been actioned. Once de-armed, the aircraft and ground crew must vacate the runway strip without delay.
- c) RWY19 arrival. Taxi to the designated OLA parking position. With prior notice and traffic permitting, ASP4 may be used to de-arm. If ASP4 will be used, the pilot must advise SQN operations to alert ground crew to meet the aircraft and advise ATC this has been actioned.

5.3 Emergencies

5.3.1 General Emergencies

- 5.3.1.1 Aircraft experiencing an emergency are to squawk 7700, broadcast a PAN or MAYDAY call on the operating and GUARD frequency, and proceed IAW Emergency Procedures in ERSA, unless otherwise stipulated in this document.

5.3.2 **ARFF Fire Commander**

- 5.3.2.1 Upon landing, emergency aircraft may be directed to contact the Fire Commander by Ground on frequency 131.0.

5.3.3 **Diversion Aerodromes**

- 5.3.3.1 Diversion of local military aircraft may be required due to adverse/hazardous weather conditions or runway obstruction. Suitable aerodromes are:

- a) Primary: Cairns
- b) Secondary:
 - i) Proserpine
 - ii) Mackay
 - iii) Rockhampton
- c) Emergency:
 - i) Charters Towers
 - ii) Ingham
 - iii) TFTA Benning Field –gravel all weather strip, C130 capable.

5.3.4 **Emergency Runway Procedures**

- 5.3.4.1 Should RWY 01/19 be closed, aircraft that cannot hold until the runway re-opens may use TWY A for an emergency landing. TWY A best supports the RWY 01 direction due to the orientation change north of TWY G. ATC must ensure the pilot is aware of this orientation change so that the most practicable landing decision can be made.
- 5.3.4.2 Alternatives to TWY A are:
- a) Divert to another airfield
 - b) Use the serviceable portion of RWY 01/19
 - c) Use RWY 07/25
 - d) Use TWY B in the event that either:
 - i) RWY 07/25 is unavailable
 - ii) RWY 01/19 crosswind exceeds aircraft or pilot endorsement and the aircraft cannot divert to an alternative aerodrome.

5.3.4.3 Refer to the YBTL Aerodrome Manual for emergency runway lighting information. In the event of emergency runway lighting being required, ARFFS may lay an emergency light path.

5.3.5 Fuel Dumping

5.3.5.1 Preferred location is north of Magnetic Island (MCI) over water, not below 6,000FT; however, ATC may advise an alternate location.

5.3.5.2 Pilots must advise ATC of their preferred heading and any other requirements.

5.3.6 Hot Brakes Procedures

5.3.6.1 When advised an aircraft may have hot brakes, ATC must issue taxi instructions and dispatch ARFFS as follows:

a) Primary option. Aircraft taxi to and park in front of the OLA, remaining clear of OLA taxiways when parked (Refer to figure 5.2).

b) Secondary option or if time critical. Aircraft to taxi to an isolated hot brake area.



(Figure 5.2)

5.3.7 Hung Ordnance Procedures

- 5.3.7.1 ATC must support aircraft recovering with hung ordnance as follows:
- a) Issue instructions so the aircraft may track clear of built up areas
 - b) Advise ARFF and ABOC that the aircraft is inbound, including the ordnance type and ensure ARFF respond. ABOC will advise relevant ground crews of the inbound aircraft.
 - c) Issue taxi instruction to the most suitable ASP.

5.3.8 Hydrazine Procedures

- 5.3.8.1 Aircraft that utilise hydrazine to power the aircraft emergency flight control system, such as F-16, can pose a serious personal safety risks due to hydrazine venting. To safely isolate the aircraft after landing, ATC must direct the pilot to a remote hot brake area.

5.3.9 Pre-Meditated Ejection

- 5.3.9.1 The pre-meditated ejection areas are:
- a) VMC. Town Common with ACFT heading 030 degrees and not below 2,000FT.
 - b) IMC. Within a 4NM radius centered on the position TVL 345R012TAC. ACFT heading not specific provided within this position with ACFT not below 3,000FT.

5.3.10 Radio Failure Procedures

- 5.3.10.1 **Communications failure.** In the event of communication failure, aircraft are to squawk 7600, broadcast intentions on the operating frequency and GUARD. Aircraft should climb to the appropriate sanctuary level and proceed IAW Emergency Procedures in ERSA for the last known duty runway at TVL, remaining clear of R768 at all times and:
- a) Fast jet. Attempt to operate IAW last issued clearance for five minutes then track to TANGO clear of any active Airspace Control Means (ACMs). Then track direct TVL at or below 15,000FT (aircraft must be not above 15,000FT at TANGO).
 - i) RWY 01. From overhead TVL descend as required to conduct ILS-Z approach.
 - ii) RWY 19. From overhead TVL descend and track via the IAF for the TACAN RWY 19 approach.

b) PC21. Track as follows:

- i) VMC. Track via THORNTON GAP remaining clear of any active ACMs, descend to remain below CTA steps, then direct TVL not above 2,000FT visual.
- ii) IMC. Track via THORNTON GAP remaining clear of any active ACMs then direct TVL at/on climb to 9000FT.
 - (1) RWY01. From the overhead descend as required to conduct the ILS-Z approach.
 - (2) RWY19. From the overhead descend to the MSA and track via IAF for TACAN RWY19 approach.

c) Rotary Wing. Land as required or egress the area.

5.3.10.2 ATC and the applicable C2 agency shall coordinate when either agency suspects an aircraft has a radio failure. Upon receiving advice, or expecting that an aircraft has suffered a radio failure, the C2 agency shall cease all activity conflicting with this procedure and de-conflict other aircraft that may be impacted by the recovery procedure.

5.3.10.3 **HEFOEF.** In addition to the procedures contained in FLIP, for an aircraft experiencing radio failure, use of the following Hydraulics, Electrics, Fuel, Oxygen, Engines and Flight Control (HEFOEF) SSR codes to identify additional malfunctions in addition to radio failure may assist ATC awareness:

- a) 7701 – Hydraulics
- b) 7702 – Electrics
- c) 7703 – Fuel
- d) 7704 – Oxygen
- e) 7705 – Engines
- f) 7706 – Flight Controls.

6 Departures & Arrivals

6.1 Rotary Wing Operations

- 6.1.1 **Clearance Request.** To facilitate appropriate airspace releases, aircraft are to advise ATC of any intended use of active RA at clearance request.
- 6.1.2 Unless a taxi clearance specifies the words “ground taxi”, a clearance to taxi from the 5AVN Hardstand to TWY B includes permission for stationary hover ops in ground effect. If cleared to ground taxi, the aircraft must contact TWR for further clearance prior to hovering.
- 6.1.3 **Simultaneous Runway Operations.** Helicopters may conduct simultaneous operations to one runway provided:
- a) The preceding helicopter is at least 1,000FT upwind of the landing area allocated to the following aircraft
 - b) ATC specifies ‘Short/Centre/Long’ in the landing clearance
 - i) Short – the first 1000FT
 - ii) Centre – the centre 1000FT
 - iii) Long – the last 1000FT of the RWY in use
 - c) For RWY 01/19 short, centre or long may be used. RWY 07/25 short and long may be used.
- 6.1.4 Subsequent take off by the second helicopter with the upwind end of the runway occupied is only permitted for offset departures.
- 6.1.5 **Offset Departures.** Conditions permitting, ATC may approve offset departures by specifying ‘offset departure left/right, cleared for take-off’. Aircraft must:
- a) offset their departure as directed to avoid the upwind aircraft
 - b) not conduct a practice engine failure after take-off
 - c) maintain as close as practicable the take-off direction in use
 - d) when outside the RWY strip and clear of other aircraft, resume normal circuit procedures or proceed as directed by ATC.
- 6.1.6 **Standard Tracking.** Aircraft to/from YBTL and TFTA shall normally be tracked as follows (by day and night):
- a) RWY01:
 - i) Outbound: Thornton North VFR Route (TNPN) not above 1,500FT
 - ii) Inbound: Thornton South VFR Route (TNPS) not above 1,500FT

b) RWY19:

- i) Outbound: Thornton South VFR Route (TNPS) not above 1,500FT
- ii) Inbound: Thornton North VFR Route (TNPN) not above 1,500FT

6.1.7 **Ground effect.** Upon receipt of a pilot report that an aircraft is operating 'in ground effect', ATC will not treat the aircraft as airborne for the purpose of separation. Ground effect is approximately 60 FT AGL for 5 Aviation rotary wing aircraft.

6.1.8 **Separation with TFTA.** The following applies to rotary wing aircraft:

- a) VFR operations. ATC will not provide separation with TFTA airspace; aircraft captains are solely responsible for this. Pilots may request advice of the airspace status.
- b) IFR operations. ATC assumes responsibility for separation with TFTA airspace.

6.1.9 **Wake Turbulence Management.** In addition to authorised waivers permitted by FIHA, to facilitate minimal departure delays due fixed wing aircraft wake turbulence affecting RWY 01/19, military helicopters departing to the West may be instructed to 'depart from Bravo 1 and remain West of the NDB'. If instructed to remain West of the NDB, on departure remain 760m displaced from RWY 01/19.

6.2 PC21 Operations

6.2.1 **Standard Tracking.** Aircraft to/from YBTL and TFTA shall normally be tracked as follows (by day):

a) RWY01:

- i) Outbound: Thornton North VFR Route (TNPN) at 2,500FT
- ii) Inbound: Thornton South VFR Route (TNPS) at 1,500FT

b) RWY19:

- i) Outbound: Thornton South VFR Route (TNPS) at 2,500FT
- ii) Inbound: Thornton North VFR Route (TNPN) at 1,500FT

6.2.2 **Airspace Entry/Exit.** PC21 aircraft should follow the following procedures to and from the airspace:

- a) Entry. Remain within D745 until in receipt of a clearance from the applicable C2 agency and maintain 2500FT. Line of sight communications between C2 agency and ingress aircraft may be restricted.
- b) Exit. Establish within D745 and depart D745 at 1500FT. Aircraft are to remain

below the TVL Control Area (CTA) step until in receipt of a clearance from 452SQN TVL FLT.

6.3 Fast Jet Operations

- 6.3.1 The YBTL SID procedures are not compatible with the F35A. Consequently, the LIGHTNING ONE and THUNDER ONE departures described in Annex A are to be used in IMC. The 81 WG STANDO is responsible for updating the procedures described in Annex A.
- 6.3.2 Unless otherwise directed by TWR, formation 'Fast Jet' ACFT will transfer from the TWR frequency to the APP frequency as soon as practicable after take-off. Automatic transfer should be initiated no later than the lead ACFT reaching 2000 FT or 2NM TL. If directed by TWR 'airborne contact APP', ACFT should contact APP as soon as practicable after take-off no later than reaching 2000FT or 2NM TL.
- 6.3.3 **Airspace Entry/Exit.** Fast jet aircraft should track via the following procedures to and from the airspace:
- a) Entry. Fast jet aircraft departing TVL for the exercise airspace are to track via TANGO at 17,000FT. Once established in R738B, contact the applicable C2 agency for onwards clearance. If unable to establish two-way communications, aircraft shall remain within R738B and climb to block level 26,000FT to 27,000FT.
 - b) Once established in the block level, aircraft may operate within the lateral confines of the area of operations. Aircraft shall not descend below 26,000FT unless in receipt of a clearance from the applicable C2 agency.
 - c) Track shortening may be approved by the controlling C2 agency either direct to TVL ATC or via the pilot. If track shortening availability is advised to the pilot vice TVL ATC, they will need to advise TVL ATC that they are in receipt of C2 approval. ATC approval for the track shortening approved by the airspace C2 is traffic and workload dependent.
 - d) Exit. In order to avoid delays on recovery, aircraft departing exercise airspace for TVL are to provide 10 minutes notice to TVL ATC prior to recovery, aircraft are to request tracking as follows:
 - i) Via TANGO/SIERRA. Aircraft formations can return at a single level between 12,000FT to 15,000FT inclusive. This enables formations to be de-conflicted if there is a requirement to hold in airspace prior to SIERRA/TANGO while awaiting clearance. Multiple formations are to be vertically separated by 1000FT prior to leaving exercise airspace.

- ii) Via JOCKO. Return via JOCKO is only to be used if R752 is active. Aircraft are to return at 9,000FT and TVL Approach may request an 'at JOCKO by time' for sequencing.
- iii) Via SALSA. Return via SALSA is only to be used if R752 is not active. Aircraft are to return at 9,000FT and TVL APP may request an 'at SALSA by time' for sequencing.

6.3.4 D745 is situated underneath R738, from SFC-7,000FT. Aircrew are advised that civilian general aviation aircraft, including helicopters (both general aviation and Army) may be operating in D745. Aircrew are to exercise caution when operating in D745 as traffic information will not be available

6.3.5 When both D745 and R738 are active, fixed wing aircraft operating in the airspace control area may utilise that portion of D745 contained within CTA without coordination to TVL ATC provided they are operating VFR.

6.4 Departures

6.4.1 Departure Types. Where weather conditions allow and unless otherwise requested by the pilot, departing aircraft should be cleared on a Visual Departure with the following exceptions:

- a) All IFR BE20/B350 and medium or heavy wake turbulence category fixed wing aircraft shall be cleared via the following SIDS:

Cleared Waypoint	SID
WALTA	WALTA (X) DEPARTURE
JEMMA	JEMMA (X) DEPARTURE
ANRUB	ANRUB (X) DEPARTURE
CATEY	CATEY (X) DEPARTURE
CARMN	CARMN (X) DEPARTURE
PEWEE	ADNOD (X) DEPARTURE PEWEE TRANSITION
AKROM	ADNOD (X) DEPARTURE AKROM TRANSITION

- b) Alternative departure types may be requested from Clearance Delivery.

6.4.2 **Instrument Training.** All aircraft conducting instrument training, other than arriving aircraft, may expect a clearance at 6,000FT direct to either:

- a) The initial approach fix
- b) AGPOK for overhead approaches (including the VOR-A and NDB-A).

6.4.3 **Formation Separation**

6.4.3.1 On a visual departure formations performing a stream take-off intending to establish in standard formation, are to adopt a 2nm trail closing to standard formation. Once established in standard formation report this to ATC.

6.4.3.2 Following elements of an in trail formation on a visual departure are permitted to turn inside their lead elements flown track to enable remaining within 2nm trail.

Note: ATC will apply separation to ACFT not within the formation based off this procedure. Any variation to the above shall be reported to ATC.

6.5 **Arrivals**

6.5.1 **Traffic Management Plan**

6.5.1.1 IFR Aircraft planned above 10,000FT arriving to Townsville can expect to be tracked via the TMP. Aircraft should be tracked via a STAR (or relevant sequencing point) for the following approaches:

- a) RWY 01: ILS or RNP-Z
- b) RWY 19: RNP-Z or RNP-P
- c) Other approach types may be requested through TVL APP or Brisbane Centre (e.g. Initial and Pitch). Aircraft should make their intentions known as soon as possible to reduce delays.

6.5.1.2 Aircraft unable to conduct the RNP-Z RWY19 should expect to be tracked via an alternate instrument approach or via ADNOD or LEBOT for sequencing, and issued a VISUAL APPROACH when conditions allow.

6.5.1.3 Aircraft arriving YBTL at or below 10,000FT, or from TVL RA, should expect a visual approach (weather permitting).

6.5.1.4 The Palm Island TMP applies to all aircraft below 5,000KG MTOW flying between YBTL and YPAM. Aircraft should plan direct YBTL/YPAM and refer to ERSAs for the expected coded clearances. When R747 is active, expect amended tracking.

|d

6.5.2 PAPI

- 6.5.2.1 The RWY 19 PAPI should not be used beyond 5NM from the threshold because it does not provide terrain clearance over Magnetic Island.

6.5.3 Initial & Pitch Procedures

- 6.5.3.1 **Initial Point (IP).** The IP is defined as a point 5NM from the ARP, displaced 1,000FT laterally to the dead side of the runway centreline, as required by the intended pitch direction.
- 6.5.3.2 **Pitch direction.** ATC will advise pitch direction prior to 15NM TL. The preferred pitch direction is west of RWY 01/19, however, pitch to the east may be required for separation.
- 6.5.3.3 **Close initial.** Close right initial for RWY01 is defined as north of Mt Stuart. Aircraft tracking via close right initial RWY 01 automatically change category to VFR at 7NM YBTL.



(Figure 6.1)



(Figure 6.2)

6.5.3.4 **Altitude and speed requirements.** The following altitude and speed requirements apply:

a) Fast jet aircraft: minimum altitude 2,500FT at initial, descending to 1,500FT for the pitch, unless directed by ATC. Maximum speed at initial is not above 350KT.

b) Non-jet aircraft: minimum altitude 1,500FT at initial. Descending to 1,000FT for the pitch, unless directed by ATC.

6.5.4 **MAGGY Arrival Procedure**

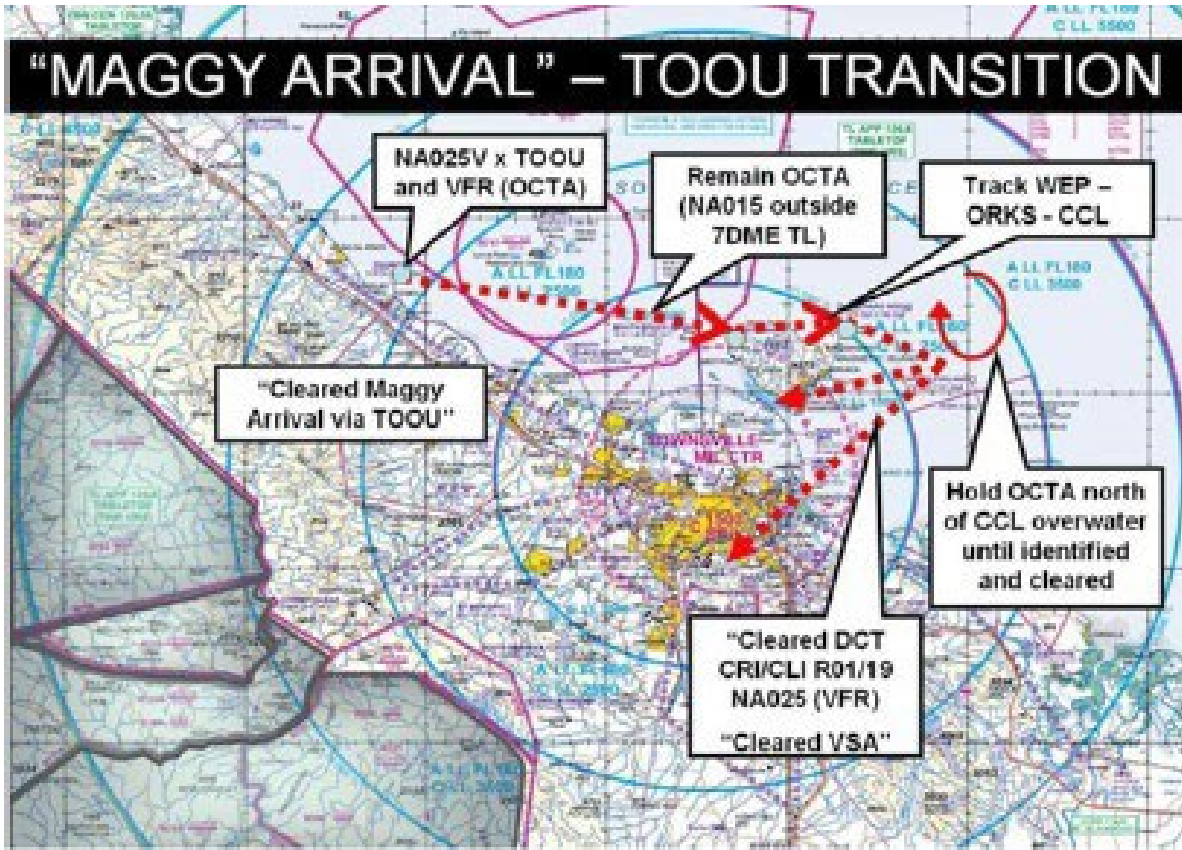
6.5.4.1 Pilots planning the 'Maggy Arrival' must include a Maggy Arrival request in the 10 or 5 minute RTB notification. Pilots should confirm requested transition, request for a 'Southern Loop' and landing intentions on departure call from the training areas with TVL APP. On first contact TVL APP will advise if the Southern Loop is available and if holding outside controlled airspace (OCTA) is expected at the Cape Cleveland Lighthouse (CCL) or north-west of MCI.

6.5.4.2 **Transition points.** The Maggy arrival has two coded clearance transition points that facilitate recovery: Toomulla (TOOU) and Yabulu (YBU).

6.5.4.3 **Tracking.** Track via initial airways clearance and expect further descent when available. Once clear of RA, traffic permitting and upon pilot report of 'visual', TVL APP will issue coded clearance: '[callsign], cleared maggy arrival via [YBU or TOOU], expect southern loop or southern loop not available, expect [left/right] pitch'.

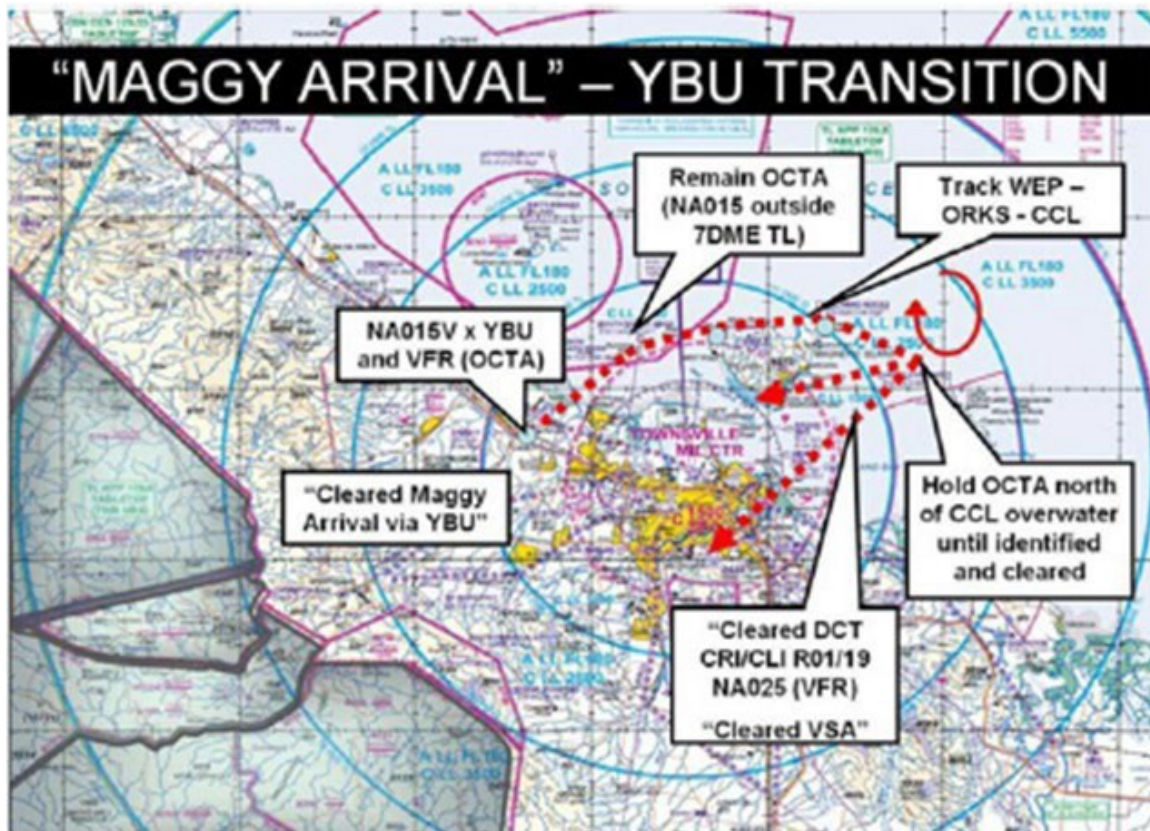
6.5.4.4 The TOOU and YBU coded clearances authorises:

- a) TOOU transition. Tracking from current position direct to TOOU, on descent to not above 2,500FT VISUAL, with an automatic category change from IFR to VFR at TOOU. Aircraft must establish not above 2,500FT VISUAL no later than TOOU, with a requirement to report once established OCTA.



(Figure 6.3)

b) YBU transition. Tracking from current position direct to YBU, on descent to not above 1,500FT VISUAL, with an automatic category change from IFR to VFR at YBU. Aircraft must establish not above 1,500FT VISUAL no later than YBU, with a requirement to report once established OCTA.

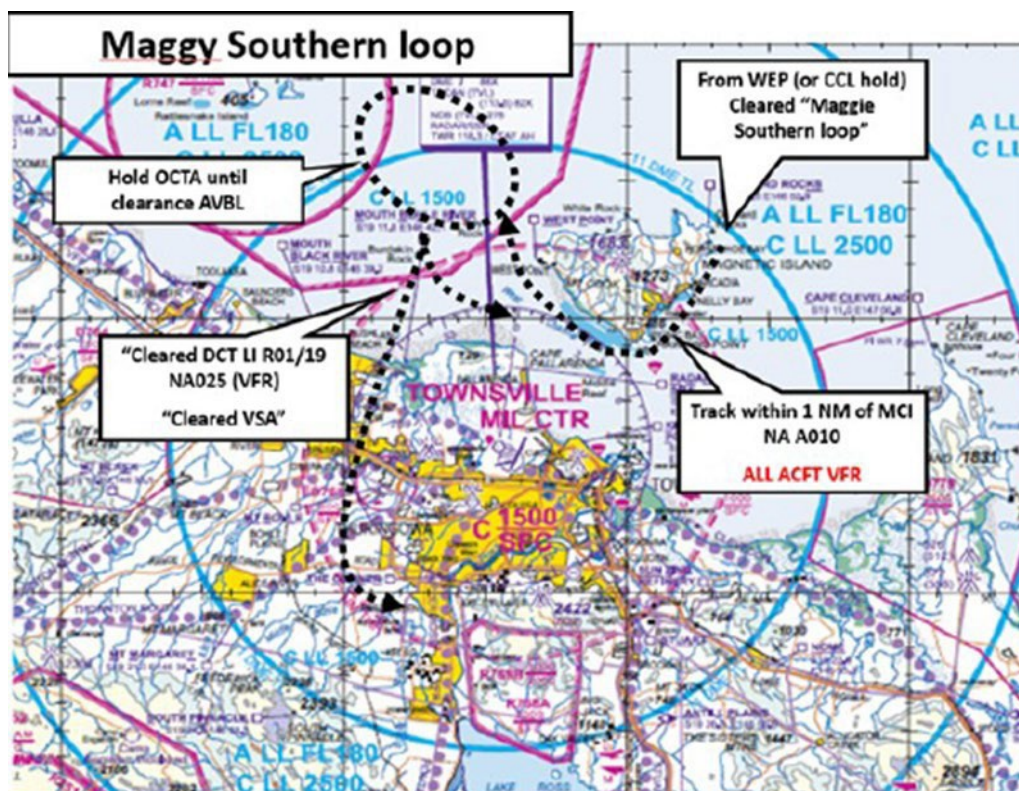


(Figure 6.4)

6.5.4.5 OCTA tracking and holding. Once OCTA, track WEP-ORKS-CLL, remaining over water (outside 7DME TL).

a) Southern loop not available. If southern loop is not available, report approaching CCL, and if an alternative clearance is not provided, hold OCTA over water north of CCL, remaining visually clear of D779. If identification is lost behind MCI, expect onwards clearance once re-identified or holding instructions.

b) Southern loop available. If cleared the southern loop, track via the southern shores of MCI (within 1NM) not above 1000FT and establish OCTA to the north west of MCI. Expect onwards clearance or holding instructions.



(Figure 6.5)

6.5.4.6 **Onwards clearance.** Expect an onwards clearance from OCTA to close right or left initial [RWY 01/19] not above 2,500FT. This level enables climb to remain clear of R768A and/or terrain as well as to enable climb to initial and pitch height. If R768B is active, for RWY 01 arrivals can expect a clearance not above 3,000FT.

7 Circuit Area

7.1 Circuit Area

- 7.1.1 The CIRA is defined as airspace within 5NM radius of the YBTL ARP.
- 7.1.2 The CIRA is frequented by both military and civil traffic including light, medium and heavy wake turbulence helicopters and fixed wing aircraft. CIRA operations are to be conducted VFR and are available by day and night.
- 7.1.3 Preferred CCT direction:
- a) RWY 01 – left CCTs, avoiding Cape Pallarenda built up areas
 - b) RWY07 – left CCTs
 - c) RWY19 – right CCTs, avoiding Cape Pallarenda built up areas
 - d) RWY25 – right CCTs
- 7.1.4 Clearance. Aircraft requiring a CIRA or CTR clearance must contact TVL GROUND to obtain SSR code and airways clearance.

7.2 Ground Effect

- 7.2.1 Ground Effect. Upon receipt of a pilot report that an aircraft is operating 'in ground effect', ATC will not treat the aircraft as airborne for the purpose of separation.
- 7.2.2 Ground effect is approximately 60 FT AGL for 5 Aviation rotary wing aircraft.

7.3 Northern Grass

- 7.3.1 Northern Grass is contained within the CIRA and is used for winch training. Northern Grass is not available when OLAs 1 to 5 are in use.



(Figure 7.1)

7.4 Town Common

7.4.1 Town Common is a helicopter training area within the Circuit area west of Townsville.

7.4.2 Town Common is defined as the area bounded by a line from the Radar Site (RDRS), to the western boundary fence, through the HF transmitter site to the Bohle River, along the Bohle River and the coastline back to the RDRS. The Town Common has the following sectors that may be used by ATC:

- a) Many Peaks. The portion of Town Common north of the southern slopes of Many Peaks (MYP).
- b) Town Common East. The portion of Town Common west of the line running from the southern point of MYP and south of the southern slopes of MYP.
- c) Town Common West. The portion of Town Common west of the line running from the southern point of MYP and south of the southern slopes of MYP.



(Figure 7.2)

7.4.3 Clearance. Aircraft requiring a Town Common clearance must contact TVL GROUND to obtain SSR code and airways clearance.

7.5 Helo West

7.5.1 Contained within the CIRA and activated on request. Military and civilian helicopters operate in this area and the associated HLS Pad West.

7.5.2 Helo West dimensions are:

a) Lateral limits. In a clockwise direction from the southern slopes of Many Peaks Range – western edge of the NOLA, requirement to remain one mile west of the coast – NDB, remaining northwest of the navaid – HF TX Site, remaining east of the facility – southern tip of Many Peaks Range, requirement to remain 1NM east of the Bohle River.

b) Vertical limit. Not above 1,000FT, non-standard levels available on request.



(Figure 7.3)

7.6 Pad West

- 7.6.1 Aircrew intending to operate at Pad West are responsible for ensuring the landing area is suitable for use. Unserviceability's must be reported to ABOC.



(Figure 7.4)

7.7 Listening Watch

- 7.7.1 Once established within the assigned area, helicopters are automatically cleared to operate on 'Listening Watch' within the Town Common and Helo West. During the conduct of listening watch, the pilot may operate within the lateral confines of an assigned area no higher than the cleared level, and is not required to report airborne or on the ground. The following conditions apply:
- a) aircraft must continuously monitor TWR frequency
 - b) listening watch may be cancelled at any time by TWR using the phrase 'RESUME FULL REPORTING'.

7.8 Lavarack Circuit Area (LVK CIRA)

7.8.1 LVK CIRA is activated on request and is for helicopter use only.

7.8.2 The LVK CIRA is procedurally separated with the ILS approach RWY 01. The LVK CIRA is not procedurally separated with any of the RWY 19 SIDs or the RNP-Z/P RWY 01 APP.

7.8.3 The LVK CIRA dimensions are:

- a) Lateral limits. The area bounded by the lateral confines of the Lavarack Barracks extending up to the northern slopes of Mt Stuart. Pilots must maintain a positive fix with the LVK CIRA, as no navigational buffers have been added.
- b) Vertical limit. Not above 1,000FT.



(Figure 7.5)

8 Annex

8.3 Annex A

Thunder 1 & Lightning 1 Departure

OFFICIAL

81WG YBTL F35A Non SID Departures

Overview) There are no approved SIDs at YBTL that are suitable for F35A

This is not a SID; However, it offers a means for F35A pilots to depart in IMC/Night

Conditions while taking pilot responsibility terrain avoidance (Ref: FIHA ENR 1.1, para 2.2.12).

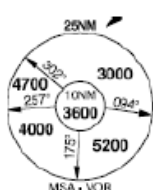
Aircraft Captain is responsible for terrain avoidance until established above MSA/MVA

Aircrew must not to accept vectors from ATC until established above MSA/MVA

Procedure checked in the FMS at 35°C, Q1013, 2xGBU31 Internal;

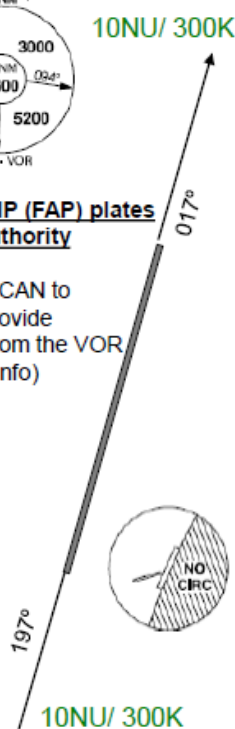
Reference Steer-point

S 19 14.9
E 146 46.2
(centre of RWY 01/19)



MSA – FLIP (FAP) plates are the authority

Setting TACAN to 88X will provide distance from the VOR (no radial info)



RWY01: LIGHTNING ONE DEPARTURE

Airways clearance comm = "Request Lightning One..."

Select Reference Steer-point, set STPT course-line 017°

T/O → MAX AB; 250KCAS → MIL; Climb at 10°NU and 300KCAS to not below 25nm MSA; >MSA Resume normal climb as per LSOPs

- Maintain Track 017° until >3600ft AMSL
- Report "passing 3600ft" to ATC
- If turning east: At 3nm or when directed by ATC; turn to assigned gate/heading
- If turning west: At 4nm or when directed by ATC; turn to assigned gate/heading

•What ifs: (eg. ENG Thrust issue)

There are two options that will ensure terrain avoidance:

- 1) Maintain Runway Track and >= 3° climb by departure threshold until above MSA; or
- 2) >= circling height and still within circling area = turn West, remain within circling area.

3° Nose up by Departure threshold = >4.5% climb (satisfies Ref C)

RWY19 – THUNDER ONE DEPARTURE

Airways clearance comm= "Request Thunder One..."

Select Reference Steer-point, set STPT course-line 197°

T/O → MAX AB; 250KCAS → MIL; Climb at 10°NU and 300KCAS to not below 25nm MSA; >MSA Resume normal climb as per LSOPs

- Maintain Track 197° until >5200ft AMSL
- Report "passing 5200ft" to ATC
- At 5nm or when directed by ATC; turn to assigned gate/heading

Produced by: SQNLDR Burr, 81WG S/IRE

Checked by: SQNLDR Cox, 81WG STANDO

References:

A. FAP North: 23 Mar 2023;

B. RAAF TVL aerodrome obstacle chart ICAO Type A Issued June 2017, Rev C (22 Jun 2017) Review 23 Mar 2028

YBTL AD2 SUPP v5 eff 27 Nov 25

CAO 23 Mar 2023