Australian Government
Civil Aviation Safety Authority

Melbourne

VISUAL PILOT GUIDE – FIXED WING 2009

The Melbourne Visual Pilot Guide (VPG) is an aid for pilots to use when flying into, out of and around Melbourne aerodromes. It is an aid for both planning and conducting your flight.

This guide was developed with the assistance of operators based at Melbourne aerodromes.

For comments and suggestions on improving this aid contact:
CASA Aviation Safety Communications

Telephone	131 757
Facsimile	02 6217 1950
Email	safetyproducts@casa.gov.au

CASA's Visual Pilot Guides – the pilot's *must have*

As a visual pilot, you are encouraged to use the Visual Pilot's Guide in the planning stage of your flight, and also to have it open on your lap while negotiating the GAAP environment. In doing this you will join thousands of pilots who have also benefited from the information that the Guides provide.

Since the Visual Pilot Guides (VPGs) were introduced in 1998, they have been an integral part of the visual pilot's flight bag. Originally developed in response to the rising number of violations of controlled airspace in the Brisbane area, its popularity grew to the point that CASA decided to produce them for all GAAP aerodromes.

CASA has now distributed around 40,000 Visual Pilot Guides for the Brisbane, Sydney Basin, Melbourne and the Perth regions. The VPGs have gone through many changes and upgrades since they first appeared. This process of continual improvement is only made possible through the feedback from the industry and the dedication of a number of industry participants. The VPGs are a must have item for any pilot wishing to fly into or out of the featured GAAP aerodromes, but it should be remembered that they do not replace the current maps and charts in any way.

CONTENTS

This pilot guide must be used in conjunction with current operational charts, documents and NOTAMs

Type		Registration	
Best rate-of-climb speed			kt
Best angle-of-climb speed			kt
Normal climb speed			kt
Best glide speed – Heavy			kt
Best glide speed – Medium			kt
Best glide speed – Light			kt
Stall speed – 0° flap			kt
Stall speed – Full flap			kt
Short-field take-off speed			kt
Short-field approach speed			kt
Flapless approach speed			kt
Normal approach speed			kt
Maximum gear extension speed			kt
V_{fe} (flap extension speed)			kt
Fuel capacity (usable)			litres
Fuel flow (65% power)			litres/hr
Fuel flow (75% power)			litres/hr
Empty weight			kg
Maximum take-off weight			kg
Maximum landing weight			kg
Maximum baggage weight			kg

Am I safe to fly?

I	llness	*Am I physically well?*
M	edication	*Am I free from the effects of drugs?*
S	tress	*Am I free from significant stress?*
A	lcohol	*Am I free from the effects of alcohol?*
F	atigue	*Am I adequately rested?*
E	ating	*Have I eaten properly to work effectively?*

Don’t fly if you are not safe!

CURRENT

Medical current?
- NO → Do not fly solo.
- YES ↓

Flight review current?
- NO → Complete before flying in command.
- YES ↓

Three or more take-offs and landings in the past 90 days?
- NO → Do not carry passengers. (CAR 5.82.)
- YES ↓

Maps and charts current?
- NO → Obtain before flight planning.
- YES ↓

Weather forecast and NOTAM
- NO → **Obtain forecast**

Website	www.airservicesaustralia.com www.bom.gov.au
Briefing	1800 805 150
PC Access	0198 304 767
	Direct dial
Helpdesk	1800 801 960

THEN ↓

- YES ↓

FLIGHT PLAN

- Choose suitable route and complete calculations.
  - e.g. heading, groundspeed, ETI, etc…
    (Refer to back section of Airservices Australia Flight Notification Form.)
    www.airservicesaustralia.com/pilotcentre

Check CTA and restricted area boundaries.

- Appropriate height.
- Flight fuel.
- Last light.
- Applied aircraft loading system.
- Take-off and landing performance.
- Survival equipment.

YES ↓

YES

SARTIME flight or flight into CTA

NO

Leave flight note with a responsible person

THEN

YES

SUBMIT FLIGHT NOTIFICATION FORM:

Fax	1800 805 150
Briefing	1800 805 150
PC Access	0198 304 767 Direct Dial
Helpdesk	1800 801 960

Radio to ATS on appropriate frequency is a last preference

YES

CHECK AIRCRAFT AND PERSONAL DOCUMENTS

Are you carrying

- Pilot's licence.
- Medical.
- Approved checklist.
- Aircraft flight manual and/or pilot operating handbook.
- Aircraft maintenance release.

YES

Plan for contingencies

- Deteriorating weather.
- Radio failure.
- Diversions.
- Departure procedures (For example, "Clearance not available, remain OCTA").

YES

AIRCRAFT PRE-FLIGHT INSPECTION

- Check sufficient hours remaining.
- Check for unserviceabilities.
- Daily inspection or pre-flight inspection as per pilot's operating handbook or company operations manual.
- Check for required maintenance.
- Maintenance release signed.
- FUEL: Check for correct grade, quantity, and contamination.
- OIL: Check quantity.

TIME IN YOUR TANKS

PRE-FLIGHT PLANNING

- Determine total fuel capacity and usable fuel (refer Aircraft Flight Manual/POH).
- Determine fuel consumption rates (refer Pilot's Operating Handbook).
- Re-familiarise yourself with the aircraft's fuel systems.
- Check fuel availability en route (note suppliers and operating hours).
- Plan to arrive with all fuel reserves intact:
  Never plan to use fixed or variable reserve fuel.
- Weight versus fuel. Keep in mind that you may not be able to carry full tanks.
- Check weather to determine holding and/or alternate fuel requirements.

PRE-FLIGHT INSPECTION

- Try to refuel on level ground to avoid inaccurate fuel measurements and unwanted fuel transfer.
- Dip each tank to check the amount of fuel. If a tank cannot be dipped, fill at least one tank (weight permitting) so there is a known fuel quantity.
- Cross-check fuel amounts by at least two separate methods. Use the lowest figure if they vary by more than 3%.
- Ensure drains are closed and vents are unobstructed.
- If using Avgas, rock the aircraft to ensure trapped water is over the drain point before carrying out a fuel drain (refer aircraft manufacturer's recommendations).
- Check for contaminants, particularly water; and correct fuel type.
- Ensure the fuel filler cap is secure and sealed.

INFLIGHT FUEL MANAGEMENT

- At regular intervals (at least every 30 minutes and at turning points) compare fuel remaining from gauges with planned figures/fuel log and monitor tank selection. Caution: Gauge readings as per aircraft's fuel calibration card.
- Use planned power settings and correct mixture leaning technique.

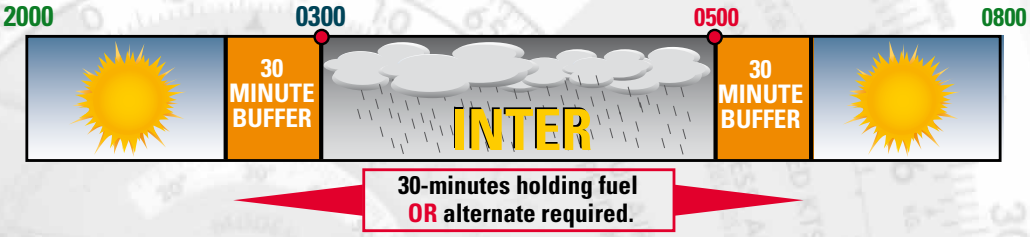
POST-FLIGHT FUEL MANAGEMENT

- Compare actual fuel used against planned fuel usage when next refuelling.

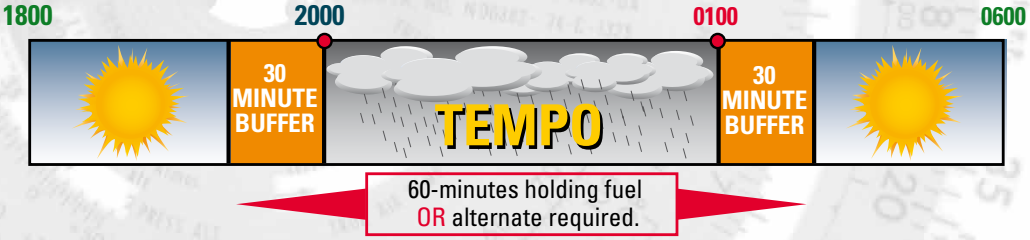
Alternate due to weather summary (VFR) – refer AIP ENR 1.1, paragraph 73

1. **Cloud:** More than SCT (3 to 4 OKTAS) below ceiling of 1,500FT; or
2. **Visibility:** Less than 8km or forecast probability of fog, mist, dust, etc; or
3. **Wind:** Crosswind or downwind more than aircraft flight manual maximum. (Wind gusts must be considered.); or
4. **Thunderstorms or severe turbulence:** Forecast or probability.

TAF YMAY 011835Z 0120/0208 09010KT CAVOK
INTER 0203/0205 16015KT 6000 SHRA BKN005 SCT030
FM 020500 16010KT CAVOK
T 15 19 24 20 Q 1008 1007 1005 1007



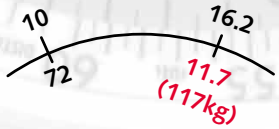
TAF YSCB 271648Z 2718/2806 33015G28KT 9999 SHRA FEW010 OVC100
TEMPO 2720/2801 1000 +TSGR BKN005 SCT040CB
T 14 13 13 11 Q 1016 1015 1013 1016



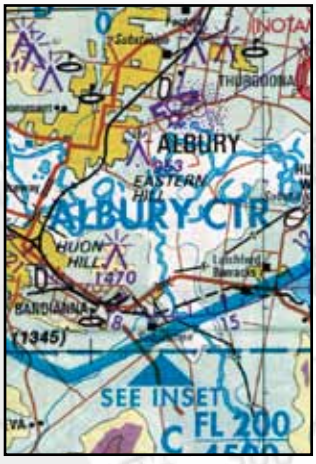
AVGAS FUEL CONVERSIONS (Conversions are approximate.)

Litres	÷ 0.72	x 0.72	Kilograms
US gallons	÷ 3.8	x 3.8	Litres
US gallons	÷ 2.72	x 2.72	Kilograms

162L AVGAS = 117kg



Example: Conversion from litres to kg using navigation computer.



Scenario - PIPER LANCE

Category:	**Charter**		
From:	**Mallacoota (YMCO)**		
To:	**Albury (YMAY)**	ETA **0500**	
Distance:	**160NM**	Wind:	**Nil**
Climb:	**110kt**	Cruise:	**150kt**

Piper Lance typical fuel flow:

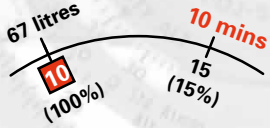
Climb:	**94 litres/hr**
Cruise:	**65 litres/hr**
Holding:	**52 litres/hr**

Use figures from your aeroplane's pilot operating handbook

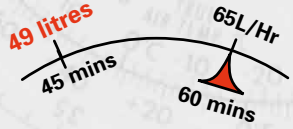
1 CLIMB

2 CRUISE

3 VARIABLE RESERVE



4 FIXED RESERVE



5 HOLDING

6 TAXI

NB: Allow appropriate fuel for aircraft (time calc. not applicable).

	FUEL CALC.	Min	L/Kg/..
1	Climb	12	19
2	Cruise	55	60
	Alternate	–	–
	SUB TOTAL	67	79
3	Variable reserve	10	12
4	Fixed reserve	45	49
5	Holding	30	26
6	Taxi	–	10
	Fuel required	152	176
	Margin	22	24
	ENDURANCE	174	200
	FROM	YMCO	

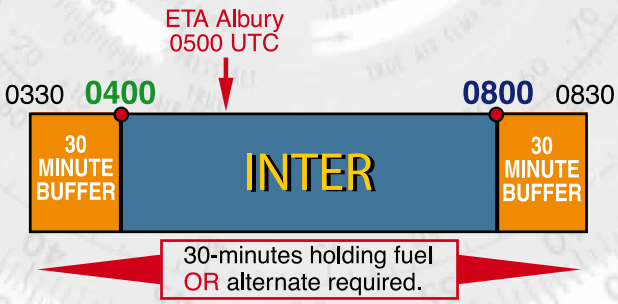
FUEL RESERVE RECOMMENDATIONS – REFER CAAP 234-1(0)

Type	Category	Flight	Variable Reserve	Fixed Reserve
PISTON	Private	IFR & VFR	not mandatory	45 minutes
	Charter RPT	IFR & VFR	15%	45 minutes
TURBINE	Private	IFR & VFR	not mandatory	30 minutes
	Charter RPT	IFR & VFR	10%	30 minutes

NOTE: Good airmanship dictates a higher margin than these recommended minima.

HOLDING FUEL

TAF YMAY 021830Z 0220/0308 35010KT CAVOK
FM 030400 30015KT OVC100
INTER 0304/0308 30020G40KT 3000+TSRA BKN010 SCT040CB
T 23 24 28 33 Q 1012 1013 1014 1009



GPS should not be used as a sole means of navigation

- Ensure GPS plan has been cross-checked against written plan.
- GPS is **not** a substitute for thorough flight planning.
- Become familiar with the operation of your GPS unit before the flight.
- Use **caution** with the GO TO function. Check for CTA and Restricted areas.
- Always apply common-sense checks to GPS information. For example: Where should the sun be relative to your position? Should the coast be on your left or right?

GPS LATITUDE AND LONGITUDE

ACADEMY (ACE)	**S37**	**53.7**	**E145**	**10.8**
ALBERT PARK LAKE (APL)	S37	51.3	E144	58.5
ALTONA (ALOA)	**S37**	**52.0**	**E144**	**51.0**
BACCHUS MARSH AERODROME (YBSS)	S37	44.0	E144	25.3
BRIGHTON (BTO)	**S37**	**54.7**	**E144**	**59.2**
CARRUM (CARR)	S38	05.4	E145	07.0
CERBERUS (CERB)	**S37**	**58.0**	**E145**	**00.0**
CRAIGIEBURN OVERPASS (CGB)	S37	36.2	E144	56.3
DONCASTER SHOPPINGTOWN (DSN)	**S37**	**47.0**	**E145**	**07.5**
ESSENDON AERODROME (YMEN)	S37	43.6	E144	54.1
FLEMINGTON (FGN)	**S37**	**47.6**	**E144**	**54.7**
FREEWAY OVERPASS (FWO)	S37	47.9	E144	59.4
GMH (GMH)	**S38**	**00.5**	**E145**	**14.3**
KALKALLO (KAO)	S37	32.2	E144	56.7
KILMORE (KIM)	**S37**	**18.0**	**E144**	**57.3**
LAVERTON (LVTN)	S37	52.0	E144	45.0
MOONEE VALLEY RACECOURSE (MVC)	**S37**	**46.0**	**E144**	**56.0**
MOORABBIN AERODROME (YMMB)	S37	58.6	E145	06.1
PLENTY (PLE)	**S37**	**43.2**	**E145**	**06.7**
POINT COOK (YMPC)	S37	55.9	E144	45.2
POINT ORMOND (PTOM)	**S37**	**53.0**	**E144**	**59.0**
ROCKBANK (ROK)	S37	43.7	E144	39.2
STATION PIER (SNP)	**S37**	**50.9**	**E144**	**55.8**
SUGARLOAF RESERVOIR (SGSV)	S37	40.5	E145	18.0
TOORONGA (TOGA)	**S37**	**51.0**	**E145**	**03.3**
TYABB AERODROME (YTYA)	S38	16.0	E145	10.5
WARRANDYTE (WRD)	**S37**	**45.0**	**E145**	**12.5**
WESTGATE BRIDGE (WES)	S37	49.8	E144	53.8
YAN YEAN RESERVIOR (YYN)	**S37**	**33.5**	**E145**	**08.3**

Flying blind...

Procedures, regulations and airspace boundaries change regularly. Some may have changed since this guide was published.

So, if this guide is your sole source of information, you're flying blind.

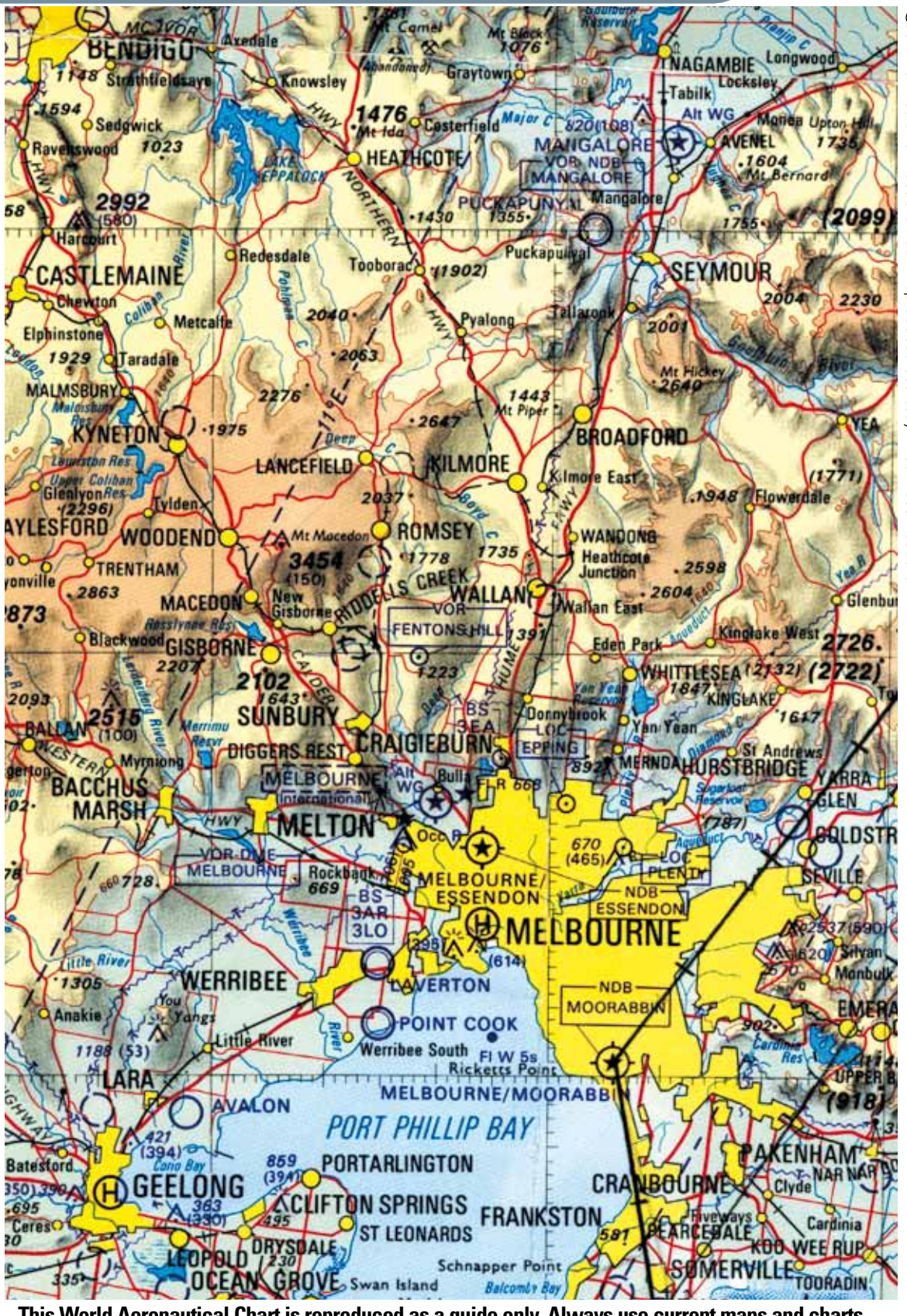
Always use current operational charts and documents, including:

- Aeronautical Information Publication (AIP) or Australian Airway Manual.
- En route Supplement Australia (ERSA) or Australian Airway Manual.
- Melbourne Visual Terminal Chart (VTC).
- NOTAM.

To order AIP, ERSA and VTC contact the Airservices Publications Centre on 1300 306 630.

To order the Australian Airway Manual contact Jeppesen on (07) 32729276

Updates of this guide can be downloaded at www.casa.gov.au



This World Aeronautical Chart is reproduced as a guide only. Always use current maps and charts.

AT A GLANCE	
Elevation	50ft
Location	S37 58.6 E145 06.1
Tower	118.1 123.0
Ground	119.9
ATIS	120.9 398
FIA	135.7
FUEL	121.65 Tysons ("Aerofuel")
	121.95 Shell ("Shell Depot")
	130.65 BP ("Air BP")

MOORABBIN AIRPORT

Moorabbin Airport is 12NM south-east of the city of Melbourne. A significant group of factory warehouses is located on the NE boundary of the Aerodrome. It is surrounded by urban and light industrial areas and is bounded by Centre Dandenong Road to the north, Boundary Road to the east, Lower Dandenong Road to the south and Grange Road and Bundora Parade to the west.

Moorabbin Airport has two parallel runway complexes in the 13/31 and 17/35 directions and a single runway 04/22. The longest runway is 17L/35R at 1,335 metres.

Airport operator: Moorabbin Airport Corporation
Address: Airport Management Centre, Bundora Parade, Moorabbin Airport, Mentone, 3194
Telephone: 03 8587 8000
Fax: 03 9587 1782

MOORABBIN GAAP PROCEDURES

For more detailed information, refer to AIP ENR 1.1 and ERSA.

GENERAL

Moorabbin is a GAAP (General Aviation Airport Procedures) airport. GAAP airports cater for high density operations in Visual Meteorological Conditions (VMC).

You must not enter the Moorabbin control zone (CTR) when it is active until you receive a circuit entry or zone transit instruction. Pilots unsure of the procedures, should advise ATC on first contact using the phrase "Unfamiliar with Moorabbin".

The circuit altitude is 1,000 feet on Moorabbin QNH. Special arrival and departure procedures are specified for some of the runways. These procedures are covered in detail later in this guide, and in ERSA.

Moorabbin has two sets of parallel runways and, by day, simultaneous contra-circuits may be conducted using separate Tower frequencies. Operations are regulated independently in each circuit, and ATC approval is required to enter the opposite circuit airspace.

Where operations are confined to a single runway, ATC will specify the circuit direction. When arriving at Moorabbin, aircraft shall track via one of the GAAP Approach Points:

Brighton, Carrum, GMH, Academy, Bay West or Shoal.

Bay West and Shoal are not covered in this guide. This is due to their limited use by VFR aircraft.

MOORABBIN CONTROL ZONE DIMENSIONS

The Moorabbin Control Zone (CTR) encompasses the airspace within a 3NM radius of Moorabbin Airport up to 2,500 feet.

CAUTION: Melbourne Class C airspace adjoins the CTR above 2,500ft.

MOORABBIN GAAP OPERATING HOURS

Moorabbin Tower is active at the following times:

Tuesday and Wednesday
0800 – 2100 or 0900 – 2200 HDS

Thursday to Monday
0800 – 1800 or 0900 – 1900 HDS

Closed Christmas Day.

Outside these hours CTAF(R) procedures apply within the control zone boundary.

Check NOTAM and ATIS to confirm operating hours.

TOWER FREQUENCIES

There are two tower frequencies in use at Moorabbin, 123.0 and 118.1. Generally, 123.0 is used for operations to the west of the aerodrome and 118.1 is used for operations to the east. This information (or any alternative frequency arrangements) will be broadcast on the Automatic Terminal Information Service (ATIS).

Note: Although Carrum is on the south-eastern side of the aerodrome, pilots arriving from Carrum should contact the tower on 123.0 unless the ATIS advises otherwise.

READ BACK REQUIREMENTS

As in any ATC environment, certain items of a clearance or instruction must be read back. Those items applicable to Moorabbin are:

1. Any clearances or instructions to hold short of, enter, land on, take-off on, cross, or backtrack on any runway;
2. Assigned runway, altimeter setting directed to a specific aircraft, SSR codes, radio and radio navigation aid frequency instructions; and
3. ATC route and approach clearance,
4. Level instructions, direction of turn and heading
5. Speed restrictions.

PROVISION OF SEPARATION

In VMC, you are primarily responsible for ensuring separation from other aircraft. ATC controls runway operations with landing and take-off clearances and facilitates a high movement rate by providing traffic information and/or sequence instructions.

STATUS OF OPERATIONS

To aid in the provision of separation ATC will determine the status of operations in the GAAP CTR as follows:

1. Unrestricted VFR Operations: There are no weather-related restrictions to aircraft operations;
2. Restricted VFR Operations: ATC may apply weather-related restrictions to VFR operations to facilitate the movement and separation of IFR aircraft. ATC will then broadcast on the ATIS, "Restricted VFR Operations". The actual restriction imposed may be specified individually to aircraft, although general restrictions may be notified on the ATIS (eg. "Start approval required").

PILOT RESPONSIBILITIES

When operating in the Moorabbin CTR, you must:

1. Sight and maintain separation from other aircraft;
2. Comply with ATC instructions while ensuring that separation is maintained from other aircraft;
3. Immediately advise ATC if unable to comply with a control instruction; and
4. Advise ATC if you are unable to sight, or if you lose sight of, other aircraft notified as traffic.

ATC RESPONSIBILITIES

Air Traffic Control (ATC) will:

1. Apply runway separation standards;
2. Issue instructions and/or traffic information to regulate traffic;
3. Provide relevant traffic information to regulate traffic;
4. Where practical, maintain surveillance of aircraft activity within the CTR and on the aerodrome.

TRAFFIC INFORMATION

You will be given traffic information by ATC when:

1. You are required to give way to, follow, or otherwise adjust your aircraft's flight path relative to that flown by another aircraft; or,
2. The relative positions of aircraft cannot be established, and a collision or near miss may be likely unless one or both aircraft adjust their flight paths. In this case an alerting service will be prefixed by the cautionary word "Alert". (The provision of traffic information does not absolve you from keeping a good lookout and manoeuvring as required to avoid other traffic.)

CLEARANCES

You must obtain a clearance before operating in the Moorabbin CTR when the Tower is active. A clearance to take-off, or instructions for circuit entry or transit constitute this clearance. Individual clearances are required for:

1. Take-off and landing;
2. Entering, crossing or taxiing along all runways;

   Note: An instruction to, "Hold Short of Runway [number] left (or right)," requires you to hold at a marked holding point or to hold short of the runway strip (For more information refer to "Circuit Operations" later in this guide.)
3. Turns in a direction contrary to the circuit for a particular runway;

   Note: An ATC circuit entry instruction constitutes a clearance for a contrary turn if that is required to comply with the instruction.
4. Circuits at a height other than 1,000 feet;
5. Operations on routes or at altitudes different from those published in ERSA.

SPECIAL VFR CLEARANCE

You must not conduct a VFR flight in the Moorabbin CTR when VMC do not exist. However, at your request, ATC may authorise you to conduct operations within the CTR in conditions less than VMC for the purpose of entering or leaving the CTR. In this case you would be issued with a Special VFR clearance (AIP ENR 1.2 – 1.2) which is only applicable within the Moorabbin CTR. It does not apply to circuit operations.

When operating under a Special VFR clearance, pilots are responsible for ensuring that:

1. The flight is conducted clear of cloud;
2. Visibility is not less than 3,000 metres; and
3. The flight is conducted in accordance with CAR 157 with regard to low flying. (AIP ENR 1.2-1.)

AERODROME INFORMATION

Automatic Terminal Information Service (ATIS) is broadcast on 120.9, and on the NDB frequency (398).

When ATIS is not available, terminal information will be provided by ATC. This will include runway-in-use information, traffic patterns and QNH. Landing information may be requested with the inbound report.

When the CTR is deactivated and CTAF[R] procedures are in use, the ATIS will broadcast information ZULU.

Aerodrome Weather Information Service (AWIS) is available on the ATIS frequency 120.9 outside Tower hours. AWIS can also be obtained by phone on 03 9580 9637.

CIRCUIT OPERATIONS

The **circuit altitude** is 1,000 feet on Moorabbin QNH, unless otherwise instructed by ATC or notified on the ATIS.

Unless otherwise instructed by ATC, you must **report downwind** when starting the downwind leg, and must advise your aircraft type, callsign, and intentions (ie, full stop or touch-and-go).

If **frequency congestion** prevents the call being made in this position you must report mid-downwind or late-downwind, as appropriate.

If you wish to conduct **non-standard circuit operations,** such as glide and flapless approaches, you must advise ATC with the downwind report (or a taxi call). This advice will also alert other circuit traffic.

The following manoeuvres are not permitted:

1. Simulated engine failures after take-off in single-engine aircraft.
2. Practice landings with feathered propellers.
3. Simulated asymmetric operations after take-off on Runways 17R and 22.

When appropriate, ATC will issue a **sequencing instruction**. In sequencing aircraft ATC will indicate the position of the preceding aircraft by reference to a leg of the circuit or as a clock bearing, and describe it either as a specific type or in general terms (eg, Cessna or Twin).

ATC may issue a **sequence number**. Sequence numbers specify the landing sequence position of an aircraft with respect to any preceding traffic.

CIRCUIT OPERATIONS (CONTINUED)

The instruction **"follow"** requires you to sight the preceding aircraft, and regulate your circuit speed and approach path to achieve longitudinal separation. If the preceding aircraft cannot be sighted and identified, you must advise ATC.

ATC will advise when **wake turbulence** may be a hazard.

A landing clearance does not diminish your responsibility to maintain sufficient separation from the preceding aircraft during landing.

Note: An aircraft can be cleared to land while a preceding aircraft is still on the runway provided ATC is satisfied that no collision risk exists.

If ATC instructs you to **go around**, or you initiate a missed approach, you must:

1. Commence climb to circuit height.
2. Position the aircraft on the active side and parallel to the runway you are using, while maintaining separation from other aircraft.

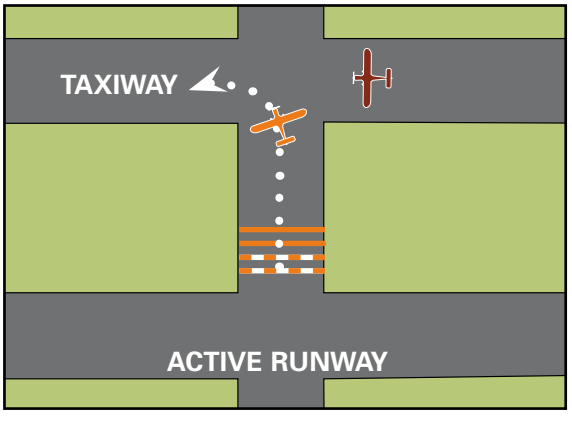
   Caution: When helicopters are engaged in circuit operations do not make any turns until past the departure end of the runway.
3. Follow ATC instructions or re-enter the circuit from upwind.

Caution: At certain times there may be other aircraft on simultaneous approaches to Moorabbin's parallel runways. It is imperative that you:

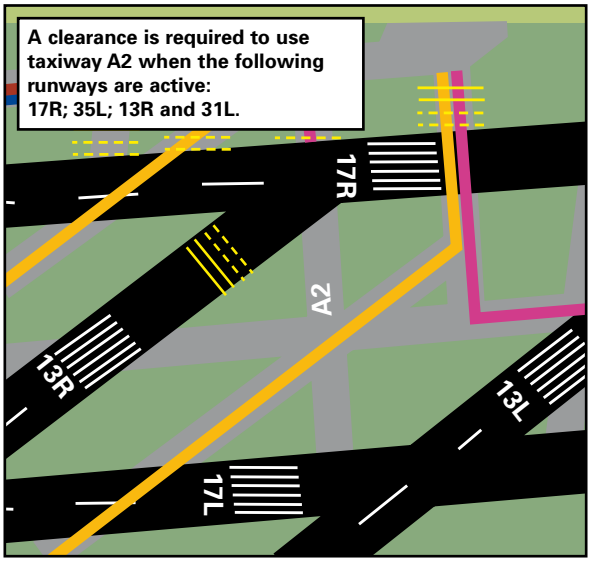
- Identify any traffic on the opposing base leg and monitor their position while you are turning final;
- Do not overshoot when turning final; and
- Do not drift off the extended runway centreline once established on final.

TAXIING AFTER LANDING

1. After landing, you should vacate the runway as soon as possible. Aircraft on the taxiway must give way to aircraft vacating the active runway.



After vacating the runway, you must not cross or taxi along a runway unless you obtain ATC clearance to do so.



2. Prior to landing, you should plan the taxi route to your parking position.
3. Contact Moorabbin Ground (119.9 MHz) immediately after vacating the landing runway. An instruction to hold short of a runway (eg "Hold short of runway 31R") requires that you hold at a marked holding point or hold short of the runway flight strip.

TRANSITING WITHIN 6NM MOORABBIN

1. Obtain the ATIS
2. Advise Moorabbin Tower of your aircraft type, position, altitude and intentions prior to 6NM Moorabbin. (Use 118.1 if you are east of the airport, 123.0 if you are west including Carrum);
3. You will be instructed to transit the CTR at 1,500; 2,000 or 2,500 feet.
4. Maintain a continuous listening watch on the Moorabbin Tower frequency (118.1 or 123.0 MHz) while operating in this airspace.

Maintain a continuous lookout for other aircraft.

ARRIVALS

Arriving aircraft shall report at one of the GAAP Approach points (Academy, Brighton, Carrum, GMH, Bay West or Shoal) at a recommended altitude of 1,500 feet.

Frequency 118.1 is normally used for traffic east of Moorabbin and 123.0 for traffic west of Moorabbin including Carrum.

Enter the zone at 1,000 feet (circuit height), unless you are instructed to "overfly" or "join upwind". If instructed to "overfly" or "join upwind" enter the zone at the altitude specified by ATC.

DEPARTURES

Depart clear of GAAP Approach Points and climb to 2,000 feet (or up to 2,500ft if conditions permit) without delay.

If you are departing to remain in Class G airspace, change to Melbourne Radar (135.7) when 6NM from Moorabbin (when the Tower is active). Specific transfer instruction will not be issued by ATC.

DEPARTURES TO SOUTH FROM RUNWAY 17

Aircraft departing from Runway 17 to the south must remain over land until abeam Carrum. (Aircraft departing on 17R shall turn left to follow the coast when south of Woodlands Golf Course.)

DEPARTURES FROM RUNWAY 31L

After take-off on Runway 31L maintain runway heading until over Kingston Centre.

The following aircraft are not permitted to use Runway 31L for take-off unless no other runway is available:

C180, C185, C206, C210, C336/337, BE35/36 with two-blade prop, and Warbirds fitted with constant-speed props.

DEPARTURES FROM RUNWAY 17R

After take-off on Runway 17R maintain runway heading until south of Woodlands Golf Course.

The following restrictions apply to Runway 17R:

1. Departures are not permitted from runway 17R before 9am EST/HDS.
2. Jet departures are not permitted from runway 17R.
3. The following aircraft are not permitted to use Runway 17R for take-off unless no other runway is available:

C180, C185, C206, C210, C336/337, BE35/36 with two-blade prop, and Warbirds fitted with constant-speed props.

START APPROVALS

Start approval is required for the following aircraft:

1. Aircraft departing for airwork in the Melbourne Terminal Area.
2. Aircraft intending to land at Melbourne.
3. Aircraft intending to climb into Class C airspace for a landing at Essendon.
4. If notified on the ATIS.

TRANSPONDER

If you are operating in Class G airspace or the Moorabbin CTR, your transponder should be set to code 1200 and switched on (with ALT [Mode C] selected).

Switch your transponder on when READY for take-off and leave it on until after landing.

Note: If you are engaged in circuit training at Moorabbin, select Code 1200 and switch your transponder to standby.

RADIO FAILURE

If possible land at an aerodrome such as Tyabb, Lilydale or Bacchus Marsh, and arrange a "no radio" arrival by phone on 03 9586 6180.

Otherwise, carry out general COM failure procedures.

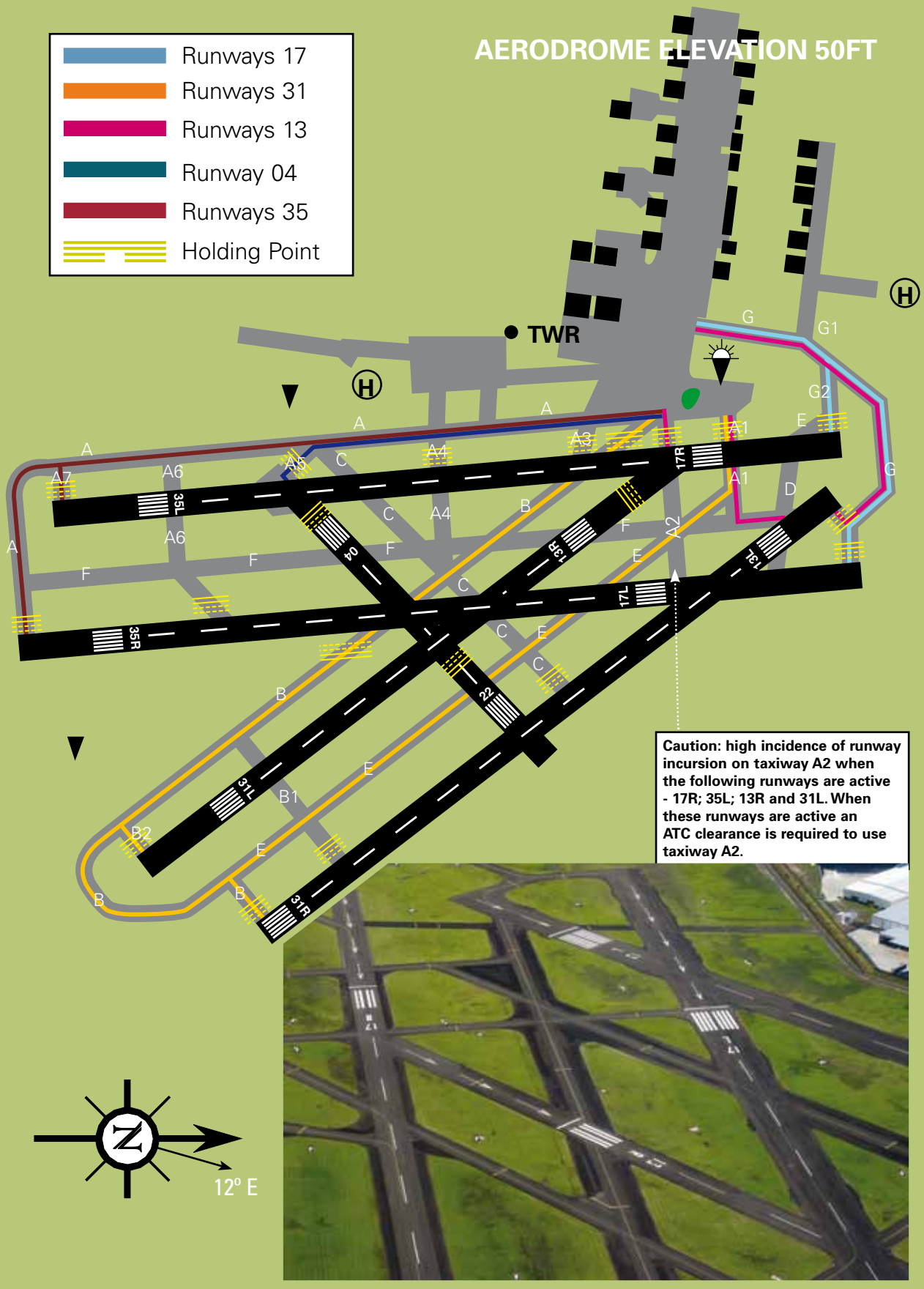
Track via a GAAP Approach Point. Enter the CTR at 1,500 feet AMSL and maintain that altitude until overhead the aerodrome.

Ascertain the landing direction, descend to 1,000 feet AMSL and join the western circuit on crosswind (remain clear of the eastern circuit). Proceed with a normal circuit and landing.

Maintain separation from other aircraft and watch for light signals from the Tower.

NOTICES

1. Moorabbin Airport is not available to aircraft above 5,700kg maximum take-off weight (MTOW) without prior permission from Aerodrome Operator.
2. High concentration of birds (mainly seagulls) on and in the vicinity of airport.
3. Prior permission is required for instrument approach airwork in Melbourne Terminal Airspace. Phone 03 9235 7337 for bookings.
3. Runway 35L transitional surface infringed by a building on the west side approximately 120 metres south of the end of the Runway Strip (RWS).



Caution: high incidence of runway incursion on taxiway A2 when the following runways are active - 17R; 35L; 13R and 31L. When these runways are active an ATC clearance is required to use taxiway A2.

MOORABBIN CTAF(R) PROCEDURES

MOORABBIN CTAF[R] OPERATING HOURS

Moorabbin operates as a CTAF[R] at the following times (when Moorabbin Tower is closed):

Tuesday and Wednesday 2100 - 0800 or 2200 - 0900 HDS

Thursday to Monday 1800 - 0800 or 1900 - 0900 HDS

Christmas Day.

Check NOTAM and ATIS to confirm CTAF[R] hours.

CAUTION: Class C airspace above Moorabbin remains acive during CTAF(R) hours. Do not operate above 2,500ft without an airways clearance.

CTAF[R] FREQUENCY

CTAF[R] Frequency is 118.1MHz.

PREFERRED RUNWAYS (DAY)

1. Runway 35R is the preferred runway.
2. Runway 17L is second preference.
3. Runways 13L and 31R are equal third preference.
4. Runways 04 and 22 are not available unless operationally required. Touch-and-go circuits are not permitted on runways 04 and 22.

During CTAF[R] hours, Runways 17R, 35L,13R and 31L are not available.

NIGHT OPERATIONS

Runway 35R is the preferred runway for departures to the north at night.

Runway 13L is the preferred runway for departures to the south at night.

After 10pm (local time) departing aircraft must maintain runway heading until 1,000ft AMSL.

CIRCUITS

Right-hand circuits required on Runways 04, 31 and 35. Circuit training is not permitted outside the following hours:

Monday to Friday

0800 to 2100 EST.

0800 to 2200 HDS (Daylight saving time.)

Saturday and Sunday

0800 to 2000 or "last light", whichever is earlier.

CTAF[R] ARRIVALS (BY DAY)

Even when the Control Zone is deactivated, it is good practice to use the GAAP Approach Points (Academy, GMH, Brighton, Shoal, Baywest and Carrum) when entering the CTAF(R).

Circuit Entry

Confirm that Moorabbin is a CTAF[R] via the ATIS or AWIS (information "Zulu") or NOTAM.

Wind and QNH can be obtained via Moorabbin AWIS on 120.9 outside Tower hours

Broadcast intentions intentions on 118.1 before reaching 10NM Moorabbin.

Confirm the runway in use via the wind sock or other traffic currently in the circuit.

Remember that right-hand circuits are required for Runways 04, 31 and 35 when the Control Tower is not active.

Make a radio broadcast announcing your intentions IAW ENR 1.1-42

Turn downwind and fly a normal circuit. You should fly at least 3 legs of the circuit unless you can comply with the requirements for a straight-in approach.

Depending on traffic, it may be appropriate to broadcast "turning base".

Always keep a good lookout, especially for any aircraft making straight-in approaches IAW ENR 1.1-82 (64.5.1) circuit entry procedures and broadcast intentions IAW ENR 1.1-42.

DEPARTURES (BY DAY)

Leaving the Circuit

Confirm that Moorabbin is a CTAF[R] via the ATIS (information "Zulu"), or other traffic. Obtain AWIS information on 120.9Mhz and confirm runway for departure.

Make a taxiing broadcast with your intentions on 118.1.

If clearance into class C airspace is required, contact Flight watch on 120.0Mhz with clearance request. (generally only required prior to becoming airborne if departing to the north.)"

Make other broadcasts as necessary IAW ENR 1.1-42.

Depart the CTAF[R] on climb to 2,500 feet (if conditions allow) by extending one of the legs of the circuit.

You may depart in any direction into class 'G' airspace, but keep clear of GAAP Approach Points. You should change frequency to Melbourne radar 135.7 MHz at the CTR boundary.

Even when the Control Zone is deactivated, it is good practice to keep clear of GAAP Approach Points when tracking outbound.

ARRIVALS AND DEPARTURES (AT NIGHT)

The following differences apply under the Night VFR:

- Maintain LSALT until within 3NM of the aerodrome, and with the runway lights in sight;
- Depart on climb to 2,500 feet within the CTAF[R].

DEPARTURE TO CLASS G (GAAP VFR)	DEPARTURE TO CTA/CTR (GAAP VFR)	CTAF[R] DEPARTURE (CTAF[R] VFR)
	Submit Flight Notification by fax, NAIPS or briefing.	**If entering CTA:** Submit Flight Notification by fax, NAIPS or briefing. Airways clearance requests should be made to Flightwatch on 120.0MHz.
Obtain ATIS (120.9 or 398) *"Moorabbin Terminal Information Lima"* *Runway* ____ *Wind* ____ *Crosswind* ____ *Cloud* ____ *Visibility* ____ *Temperature* ____ *QNH* ____ *"*		Obtain ATIS & AWIS on 120.9 or 398 to confirm Moorabbin is CTAF[R] procedures. (Should be broadcasting terminal information "Zulu".)
Taxiing (Monitor 119.9) Listen out for other traffic. **Note:** Pilots wishing to engage in non-standard operations (eg, aborted take-off practice), must make a taxi call to Moorabbin Ground (119.9). IFR aircraft are required to make a taxi call.	**Taxi call (Monitor 119.9)** *"Moorabbin Ground* Aircraft type ____ Callsign ____ *Received* [ATIS] *For* (destination or intention) ____ *Runway* ____ *Request clearance."*	**Taxi call (118.1)** *"Moorabbin Traffic"* Aircraft type ____ Callsign ____ Position and Intentions ____ *Taxiing Moorabbin* *For* (destination or intention) ____ *Runway* *Moorabbin* ____ Note: Listen out for other traffic entering or leaving the CTAF[R]..
Transponder (1200) Set code 1200 and select ALT (Mode C) when READY for take-off. (If you are flying circuits at Moorabbin Set 1200 and select standby. Select ALT if you leave the CTR.)	**Transponder (allocated code)** Set allocated SSR code and select ALT (Mode C) when READY for take-off.	**Transponder (1200)** **Departing into Class G:** Set code 1200 and select ALT (Mode C) when entering the runway. **Departing into Class C:** Set allocated SSR code and select ALT (Mode C) when entering the runway.
Ready call (118.1/123.0) *"Moorabbin Tower* Callsign ____ *Ready, Runway* ____ *For* ____ *(training area, first tracking point, departure leg of circuit, circuits)* *."* *Received ....." (ATIS Identifier)*		**Take-off (118.1)** Make a broadcast when entering the runway for take-off. Make radio calls as necessary.
Depart on climb to 2,000ft (or up to 2,500ft if conditions permit)**.** Remain clear of inbound GAAP Approach Points: Academy, Baywest, Brighton, Carrum, GMH and Shoal.		
Departure Monitor Tower frequency until 6NM from Moorabbin). Then monitor Melbourne Radar (135.7).	**Departure** Depart the Moorabbin CTR following normal GAAP procedures. Contact ATC as directed.	**Departure** **Departing into Class G:** Change to Melbourne Radar (135.7) at pilot discretion when leaving the CTAF[R]. **Departing into Class C:** Contact ATC as directed.

GAAP ARRIVAL (VFR)

Obtain ATIS (120.9 or 398)

Moorabbin Terminal Information Lima

Runway ____ *Wind* ____ *Crosswind* ____

Cloud ____ *Visibility* ____ *Temperature* ____

QNH ____

Inbound call (118.1/123.0)*

"Moorabbin Tower

Aircraft type ____

Callsign ____

Position ____

Altitude ____

Received [ATIS]

Inbound."

*118.1 is normally used for traffic east of Moorabbin and 123.0 for traffic west of Moorabbin including Carrum.

Arrival altitude

Enter the zone at 1,000 feet (circuit height), unless you are instructed to "overfly" or "join upwind". If instructed to "overfly" or "join upwind" enter the zone at the altitude specified by ATC.

Downwind call (118.1/123.0)

"Callsign ____

Aircraft type ____

Downwind

Intentions ____

Straight-in approach/base

"Callsign ____

final." [or "base," or position.]

After landing (119.9)

Call Moorabbin Ground immediately after vacating the landing runway."*Moorabbin Ground,* [callsign]." Ask for "taxi guidance" if required.

CTAF[R] ARRIVAL (VFR)

Obtain ATIS & AWIS (120.9 or 398)

ATIS Should be broadcasting terminal information "Zulu" and AWIS.

Inbound call (118.1)

"Moorabbin traffic etc

Aircraft type ____

Callsign ____

Position ____

Altitude ____

Inbound Moorabbin."

Arrival altitude

Refer AIP ENR 1.4-6

Circuit joining and circuit calls

Refer AIP ENR 1.1-42

After landing (118.1)

Remain on 118.1 after landing.

Cancel SARTIME through CENSAR on 1800 814 931 or Flightwatch (120.0) when phone not available.

COMMON GAAP READ BACKS

1 **Route clearance**
2 **Runway clearances**
3 **Assigned runway**
4 **Level/altitude**
5 **QNH**
6 **Transponder code**
7 **Radio frequency**
8 **Turns/headings**
9 **Speed**
10 **Holding instructions**

(Refer AIP GEN 3.4-12 (4.4))


Moorabbin Airport
ALT 1,000ft
FREQ 118.1
Beach Rd
White St
Nepean Hwy
Boundary Rd
Woodlands
Lower Dandenong Rd
Nepean Hwy
Moorabbin
S37 58.6 E145 06.1
35L
35R
31L
31R
13R
13L
17L
17R
DFO
Centre Dandenong Rd
Warrigal Hwy
Kingston Heath
Kingston Centre
Capital
Old Dandenong Rd
Kingswood
C LL 2500
Tip
BMX Track
Spring Valley
Clayton Rd
Land Fill & Recycling Centre
GAAP CTR 0-2500ft
Fairbank Rd


Sandown Park
Sandown Park
ALT 1,000ft
FREQ 118.1
Springvale Cemetery
Descend to enter control zone at 1,000ft for all RWY operations unless otherwise instructed by the tower.
TR 205°M
TR 215°M
TR 220°M
Wellington Rd
Monash University
P
Monash Freeway
Waverley Park
Freeway Reserve
Ferntree Gully Rd
Brandon Park Shopping Centre
Reserve
C LL 2500
C LL 2500
Springvale Road
Waverley Rd
ACADEMY
S37 53.7 E145 10.8
Jells Rd
The Glen Shopping Centre
N
Academy
ALT 1,500ft
FREQ 118.1
Looking from the north-east.
Moorabbin Airport is 6NM ahead.
"Moorabbin Tower, Callsign type
Academy altitude received ATIS
inbound."
Optional: "Unfamiliar with Moorabbin."


KEY TO ALTITUDE
500ft to 0ft
1,000ft to 500ft
N
Nepean Hwy
Woodlands
CAUTION
Parallel circuit traffic. Do not drift through RWY centreline.
Lower Dandenong Rd
Straight-in approach or base
Aircraft cleared for a straight–in approach or base should report as instructed by ATC:
Callsign "base," "final" [or position].
35L
35R
31L
31R
MB GND
119.9
13R
13L
Centre Dandenong Rd
Kingston Heath Reserve
Boundary Rd
DFO
17L
17R
Capital
Old Dandenong Rd
Kingswood
Downwind
Aircraft joining downwind should report commencing the downwind leg at 1,000ft:
Callsign type downwind, "full stop," "touch-and-go," etc. [intentions]."
CAUTION
Runways 13 & 17 are easily confused

ACADEMY

Academy is situated 6NM north east of Moorabbin at an elevation of about 680ft AMSL. It looks like an old monastery, and is part of a large complex used as the Victorian Police Training Academy. Other identifying features in the area are the large "The Glen" shopping Centre and Novotel Hotel about 1NM north-west of Academy, and the nearby intersection of Monash Freeway and Ferntree Gully Road. Monash University is about 2NM south-west of the Academy.

Obtain Moorabbin ATIS information on 120.9 or 398 NDB well before arriving at Academy. It is advisable to assess potential traffic in your vicinity by listening to Moorabbin tower on 118.1 before reporting at ACADEMY. Keep a good lookout for other traffic also tracking via Academy.

GENERAL CIRCUIT JOINING INSTRUCTIONS:

1. A **Circuit Joining Instruction** is a clearance to enter the control zone. It also tells the pilot how to enter the circuit. **For example,** *"ZFR join final, RWY 17 Left, report final."*

2. **Once you receive a circuit joining instruction,** descend to reach circuit altitude (1,000ft on Moorabbin QNH) by the control zone boundary (3NM Moorabbin). If instructed to join upwind or overfly, the tower will assign you an altitude (normally 1,500ft).

3. In **sequencing aircraft** ATC will indicate the position of the preceding aircraft, by reference to a leg of the circuit or a clock bearing. The aircraft may be described as a specific type or in general terms (eg, Cessna or Twin). For example, *"ZFR, follow the Cessna on late downwind"*.
ATC may issue a sequence number. A sequence number specifies the landing order with respect to any preceding traffic.

4. **Care should be taken to maintain your position** in the sequence and to ensure you do not "cut inside" other traffic. The instruction **"Follow"** requires you to sight the preceding aircraft, and regulate your speed and approach path to achieve lateral separation. If the preceding aircraft cannot be sighted and identified, you must advise ATC. **If in doubt, tell the Tower.**

5. **Radio calls should only include the mandatory readbacks**, due to the large number of movements at Moorabbin. Refer AIP GEN 3.4-12 (4.4)

6. **Exercise caution on base and final.** Other aircraft may be on simultaneous final approaches to Moorabbin's parallel runways. It is imperative that you:
   - **Identify any traffic on the opposing base leg and monitor their position while you are turning onto final;**
   - **Do not overshoot when turning final; and**
   - **Do not drift off the extended runway centreline once established on final.**

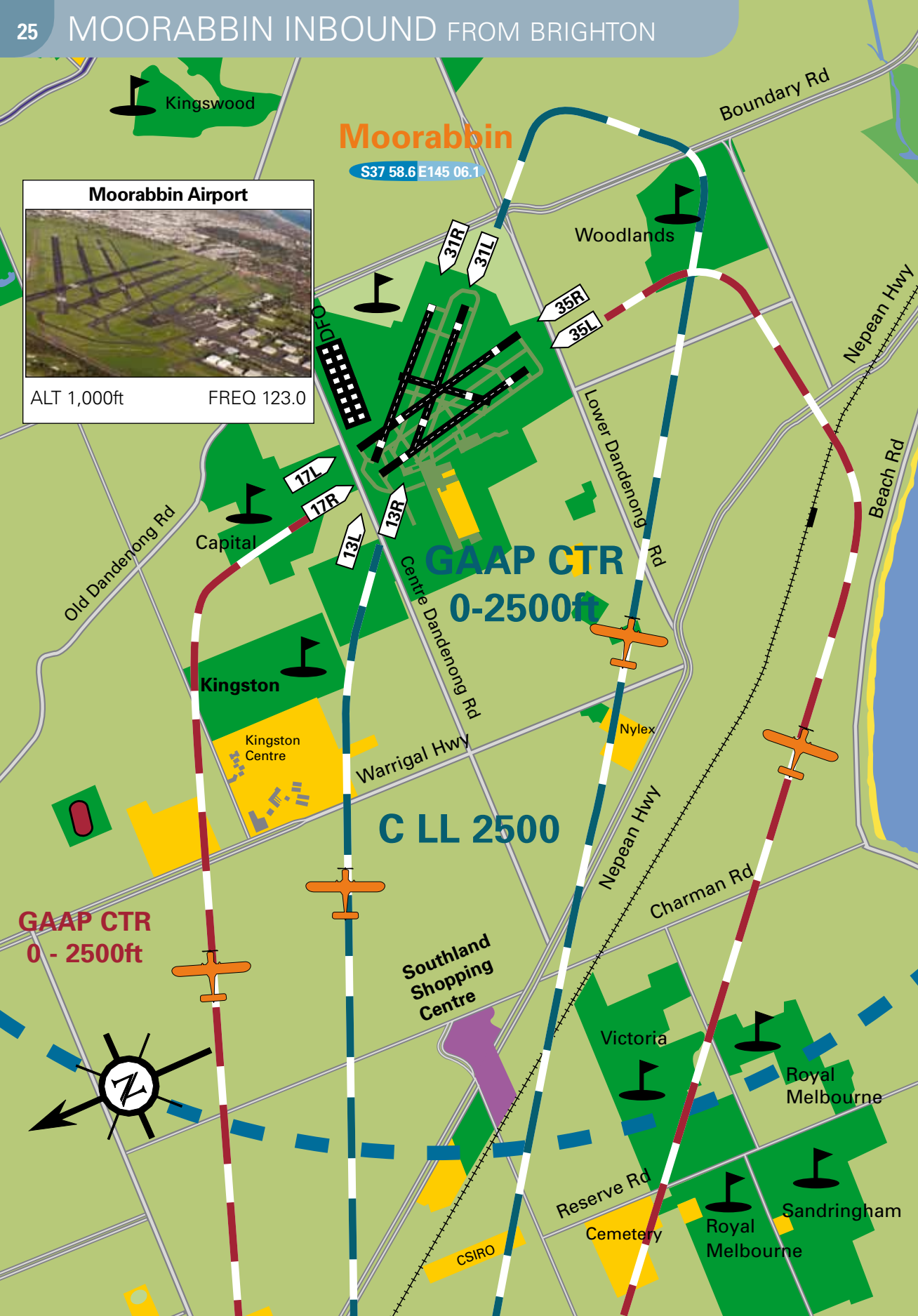
CTAF[R]

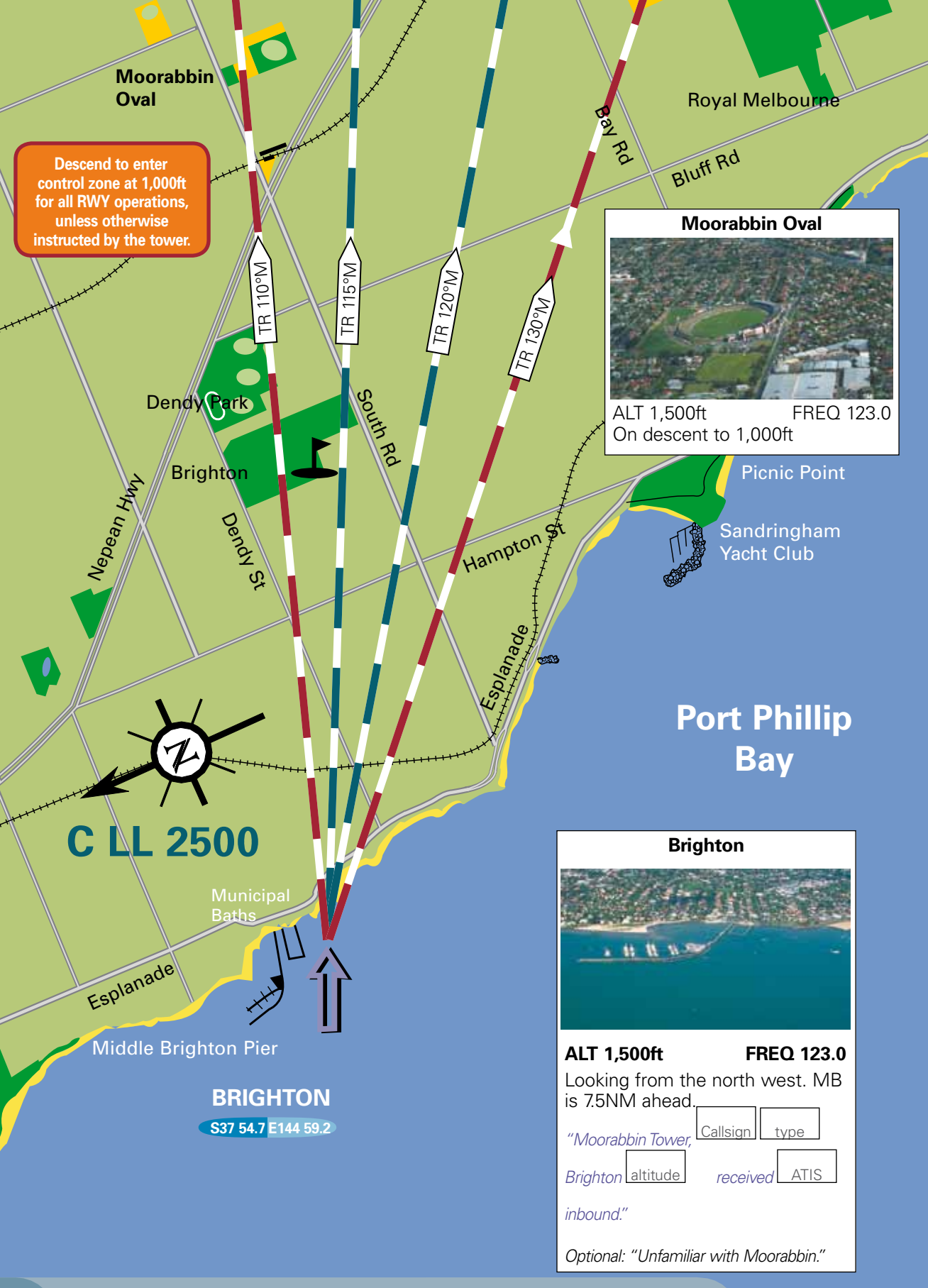
CTAF[R] Procedures: Make all necessary radio calls as per AIP, ERSA and pages 19-20 of this guide. Once you have selected the appropriate runway, fly at least three legs of the circuit. In nil–wind conditions the preferred runway is 35R – followed by RWY17L, then RWY 13L and 31R. (Runway 13L and 31R are equal preference.) Runway 04/22 is not available unless operationally required. Touch-and-go circuits are not permitted on 04/22.
Refer to AIP ENR 1.1-82 (64.6) for the requirements for making straight-in approaches at uncontrolled aerodromes with CTAF[R] procedures. AWIS is available on 120.9MHz.

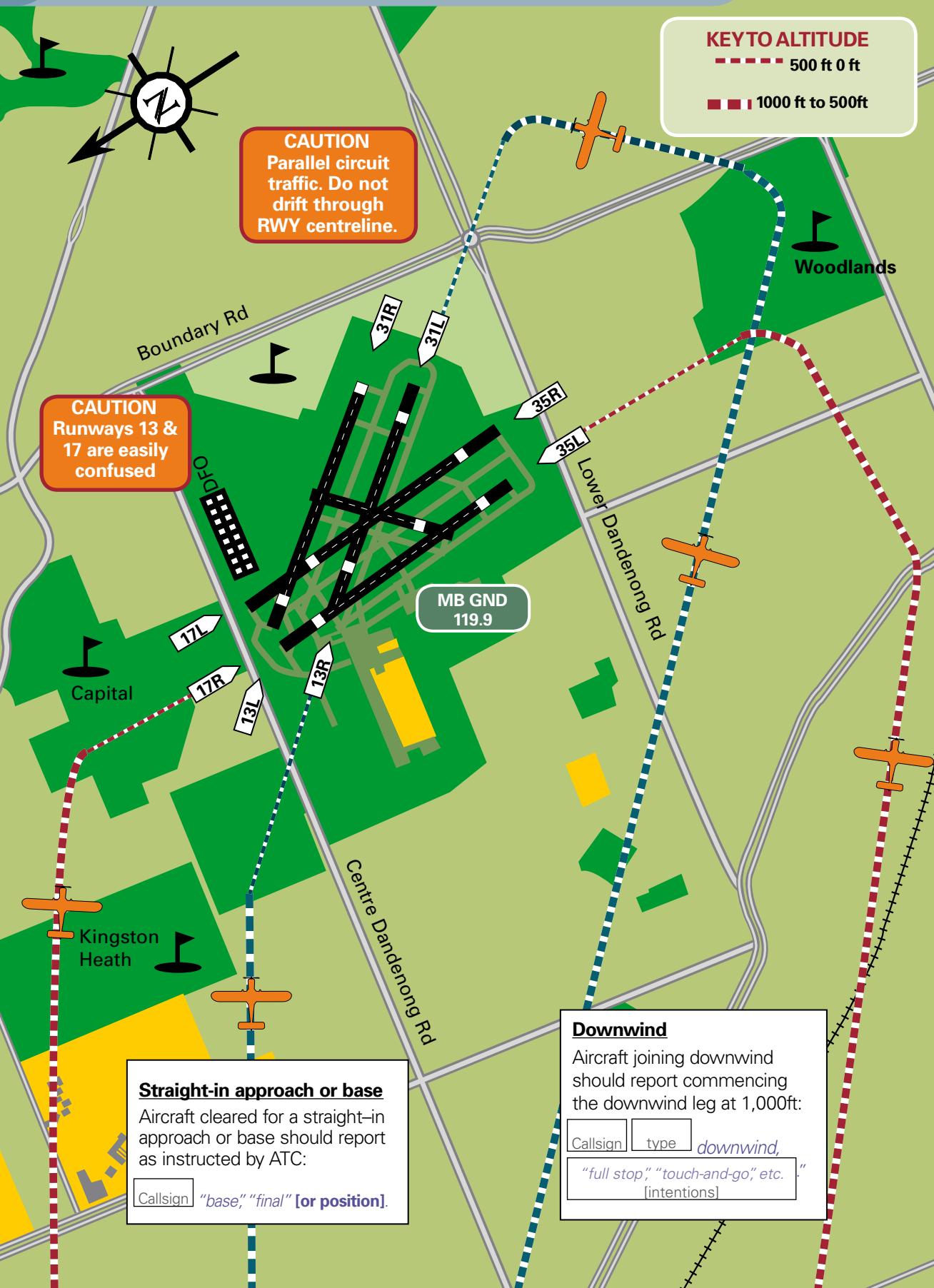
COMMON GAAP READ BACKS

1. **Route clearance**
2. **Runway clearances**
3. **Assigned runway**
4. **Level/altitude**
5. **QNH**
6. **Transponder code**
7. **Radio frequency**
8. **Turns/headings**
9. **Speed**
10. **Holding instructions**

(Refer AIP GEN 3.4-12 (4.4))


Kingswood
Moorabbin
S37 58.6 E145 06.1
Boundary Rd
Moorabbin Airport
ALT 1,000ft
FREQ 123.0
31R
31L
35R
35L
Woodlands
Nepean Hwy
Lower Dandenong Rd
Beach Rd
17L
17R
13L
13R
Capital
Old Dandenong Rd
Centre Dandenong Rd
GAAP CTR
0-2500ft
Kingston
Kingston Centre
Warrigal Hwy
Nylex
C LL 2500
Nepean Hwy
Charman Rd
GAAP CTR
0 - 2500ft
Southland Shopping Centre
Victoria
Royal Melbourne
Reserve Rd
Cemetery
CSIRO
Royal Melbourne
Sandringham


Moorabbin Oval
Royal Melbourne
Bay Rd
Bluff Rd
Descend to enter control zone at 1,000ft for all RWY operations, unless otherwise instructed by the tower.
TR 110°M
TR 115°M
TR 120°M
TR 130°M
Moorabbin Oval
ALT 1,500ft
FREQ 123.0
On descent to 1,000ft
Dendy Park
South Rd
Brighton
Nepean Hwy
Dendy St
Hampton St
Picnic Point
Sandringham Yacht Club
Esplanade
Port Phillip Bay
C LL 2500
Municipal Baths
Esplanade
Middle Brighton Pier
BRIGHTON
S37 54.7 E144 59.2
Brighton
ALT 1,500ft
FREQ 123.0
Looking from the north west. MB is 7.5NM ahead.
"Moorabbin Tower, Callsign type
Brighton altitude received ATIS
inbound."
Optional: "Unfamiliar with Moorabbin."


KEY TO ALTITUDE
500 ft 0 ft
1000 ft to 500ft
CAUTION
Parallel circuit traffic. Do not drift through RWY centreline.
CAUTION
Runways 13 & 17 are easily confused
Boundary Rd
Woodlands
31R
31L
35R
35L
Lower Dandenong Rd
DFO
MB GND
119.9
17L
17R
13L
13R
Capital
Kingston Heath
Centre Dandenong Rd
Straight-in approach or base
Aircraft cleared for a straight–in approach or base should report as instructed by ATC:
Callsign "base," "final" [or position].
Downwind
Aircraft joining downwind should report commencing the downwind leg at 1,000ft:
Callsign type downwind,
"full stop," "touch-and-go," etc. [intentions]."

BRIGHTON

Brighton is situated 7.5NM north west of Moorabbin on the shores of Port Phillip Bay. Cross the coast at the Middle Brighton Pier and Municipal Baths. You should see the airport straight ahead and the large Southland Shopping Centre just to the right.

Keep a good lookout for traffic due to the proximity of the Melbourne coastal light aircraft route and Essendon/Melbourne CTR. Obtain Moorabbin ATIS information on 120.9 or 398 NDB well before arriving at Brighton. It is advisable to assess potential traffic in the vicinity by listening to Moorabbin tower on 123.0 before reporting at Brighton.

GENERAL CIRCUIT JOINING INSTRUCTIONS:

1. A **Circuit Joining Instruction** is a clearance to enter the control zone. It also tells the pilot how to enter the circuit. **For example,** *"ZFR, join base, RWY 17 Right, report Southland."*

2. **Once you receive a circuit joining instruction,** descend to reach circuit altitude (1,000ft on Moorabbin QNH) by the control zone boundary (3NM Moorabbin). If instructed to join upwind or overfly, the tower will assign you an altitude (normally 1,500ft).

3. In **sequencing aircraft** ATC will indicate the position of the preceding aircraft, by reference to a leg of the circuit or a clock bearing. The aircraft may be described as a specific type or in general terms (eg, Cessna or Twin). For example, *"ZFR, follow the Cessna on late downwind"*.
ATC may issue a sequence number. A sequence number specifies the landing order with respect to any preceding traffic.

4. **Care should be taken to maintain your position** in the sequence and to ensure you do not "cut inside" other traffic. The instruction **"Follow"** requires you to sight the preceding aircraft, and regulate your speed and approach path to achieve lateral separation. If the preceding aircraft cannot be sighted and identified, you must advise ATC. **If in doubt, tell the Tower.**

5. **Radio calls should only include the mandatory readbacks**, due to the large number of movements at Moorabbin. Refer AIP GEN 3.4-12 (4.4)

6. **Exercise caution on base and final.** Other aircraft may be on simultaneous final approaches to Moorabbin's parallel runways. It is imperative that you:
   - **Identify any traffic on the opposing base leg and monitor their position while you are turning onto final;**
   - **Do not overshoot when turning final; and**
   - **Do not drift off the extended runway centreline once established on final.**

CTAF[R]

CTAF[R] Procedures: Make all necessary radio calls as per AIP, ERSA and pages 19-20 of this guide. Once you have selected the appropriate runway, fly at least three legs of the circuit. In nil–wind conditions the preferred runway is 35R – followed by RWY17L, then RWY 13L and 31R. (Runway 13L and 31R are equal preference.) Runway 04/22 is not available unless operationally required. Touch-and-go circuits are not permitted on 04/22.
Refer to AIP ENR 1.1-82 (64.6) for the requirements for making straight-in approaches at uncontrolled aerodromes with CTAF[R] procedures. AWIS is available on 120.9MHz.

COMMON GAAP READ BACKS

1. **Route clearance**
2. **Runway clearances**
3. **Assigned runway**
4. **Level/altitude**
5. **QNH**
6. **Transponder code**
7. **Radio frequency**
8. **Turns/headings**
9. **Speed**
10. **Holding instructions**

(Refer AIP GEN 3.4-12 (4.4))


Charman Rd
Centre Dandenong Rd
Kingston Centre
Kingston Heath
C LL 2500
Capital
17R
17L
13L
13R
Moorabbin
S37 58.6 E145 06.1
DFO
Nylex
Warrigal Hwy
Nepean Highway
Boundary Road
Kingswood
GAAP CTR
0-2500ft
35L
35R
31L
31R
Beach Rd
Mentone Beach
Lower Dandenong Rd
White Street
Woodlands
Braeside Park
Southern
Mordialloc Pier
Nepean Highway
Boundary Rd
Springvale Rd
Rossdale


Descend to enter control zone at 1,000ft for all RWY operations unless otherwise instructed by the tower.
Chelsea
Edithvale Wetlands
Wells Rd
D314
4500
0
Nepean Highway
Bicentennial Park
TR 330°M
TR 355°M
St Leonards College
C LL 4500
Port Phillip Bay
Patterson River Country Club & Golf course
Patterson River
Melbourne Water Eastern Treatment Plant
CARRUM
S38 05.4 E145 07.0
Thompson Road
Patterson Lakes
Carrum
ALT 1,500ft
FREQ 123.0
View from the south-east. MB is 6.5NM ahead.
"Moorabbin Tower, Callsign type
Carrum altitude received ATIS
inbound."
Optional: "Unfamiliar with Moorabbin."
Nepean Highway
Seaford Wetlands
Seaford Pier


KEY TO ALTITUDE
500 ft to 0 ft
1000 ft to 500ft
Kingston
Reserve
Capital
Warrigal Rd
13L
17R
17L
13R
CAUTION
Runways 13 & 17
are easily confused
Centre Dandenong Rd
DFO
MB GND
119.9
Boundary Rd
Lower Dandenong Rd
Nepean Hwy
35L
35R
31L
31R
CAUTION
Parallel circuit
traffic. Do not
drift through
RWY centreline.
C LL 2500
Woodlands
Boundary Rd
Downwind
Aircraft joining downwind should report commencing the downwind leg at 1,000ft:
Callsign
type
downwind,
"full stop", "touch-and-go", etc.
[intentions]
Straight-in approach or base
Aircraft cleared for a straight–in approach or base should report as instructed by ATC:
Callsign
"base," "final" [or position].

CARRUM

Carrum is 6.5 NM south of Moorabbin on the shores of Port Phillip Bay. The Patterson River runs into the bay north of the reporting point and a number of residential canals can be seen, south of the river about 1NM inland. It is the approach point for aircraft arriving from the south. Keep a good lookout for traffic due to the proximity of the Melbourne coastal route.

Obtain Moorabbin ATIS on 120.9 or 398 NDB well before arriving at Carrum. It is advisable to assess potential traffic in the area by monitoring Moorabbin tower on 123.0 MHz before reporting at Carrum.

When runways 17 or 35 are in use, remain over water until established in the western circuit.

GENERAL CIRCUIT JOINING INSTRUCTIONS:

1. A **Circuit Joining Instruction** is a clearance to enter the control zone. It also tells the pilot how to enter the circuit. **For example,** *"ZFR join downwind Runway 17 Right".*

2. **Once you receive a circuit joining instruction,** descend to reach circuit altitude (1,000ft on Moorabbin QNH) by the control zone boundary (3NM Moorabbin). If instructed to join upwind or overfly, the tower will assign you an altitude (normally 1,500ft).

3. In **sequencing aircraft** ATC will indicate the position of the preceding aircraft, by reference to a leg of the circuit or a clock bearing. The aircraft may be described as a specific type or in general terms (eg, Cessna or Twin). For example, *"ZFR, follow the Cessna on late downwind"*.
ATC may issue a sequence number. A sequence number specifies the landing order with respect to any preceding traffic.

4. **Care should be taken to maintain your position** in the sequence and to ensure you do not "cut inside" other traffic. The instruction **"Follow"** requires you to sight the preceding aircraft, and regulate your speed and approach path to achieve lateral separation. If the preceding aircraft cannot be sighted and identified, you must advise ATC. **If in doubt, tell the Tower.**

5. **Radio calls should only include the mandatory readbacks**, due to the large number of movements at Moorabbin. Refer AIP GEN 3.4-12 (4.4)

6. **Exercise caution on base and final.** Other aircraft may be on simultaneous final approaches to Moorabbin's parallel runways. It is imperative that you:
   - **Identify any traffic on the opposing base leg and monitor their position while you are turning onto final;**
   - **Do not overshoot when turning final; and**
   - **Do not drift off the extended runway centreline once established on final.**

CTAF[R]

CTAF[R] Procedures: Make all necessary radio calls as per AIP, ERSA and pages 19-20 of this guide. Once you have selected the appropriate runway, fly at least three legs of the circuit. In nil–wind conditions the preferred runway is 35R – followed by RWY17L, then RWY 13L and 31R. (Runway 13L and 31R are equal preference.) Runway 04/22 is not available unless operationally required. Touch-and-go circuits are not permitted on 04/22.
Refer to AIP ENR 1.1-82 (64.6) for the requirements for making straight-in approaches at uncontrolled aerodromes with CTAF[R] procedures. AWIS is available on 120.9MHz.

COMMON GAAP READ BACKS

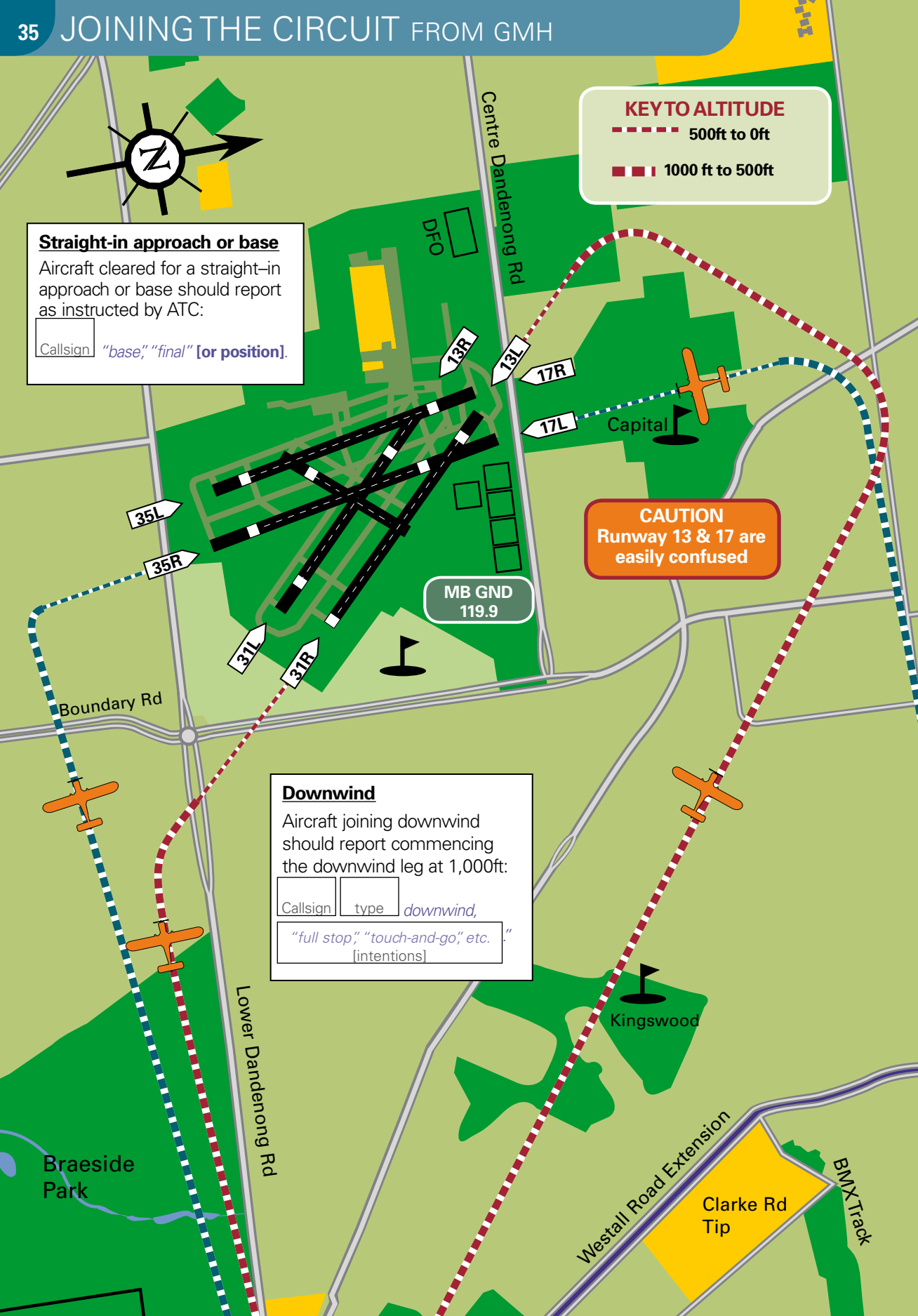
1 **Route clearance**
2 **Runway clearances**
3 **Assigned runway**
4 **Level/altitude**
5 **QNH**
6 **Transponder code**
7 **Radio frequency**
8 **Turns/headings**
9 **Speed**
10 **Holding instructions**

(Refer AIP GEN 3.4-12 (4.4))

Sandown Park

ALT 1,000ft.....FREQ 118.1
View from the north.


Parkmore Shopping Centre
Parkmore Shopping Centre
ALT 1,000ft ..... FREQ 118.1
East Link Freeway
Cheltenham Rd
Greaves Reserve & Showground
Princes Hwy
TR 300°M
Descend to enter control zone at 1,000ft for all RWY operations unless otherwise instructed by the tower.
C LL 4500
Greens Rd
TR 280°M
Stud Rd
Frankston Dandenong Rd
Pilkington Australia
Dandenong Workers
South Gippsland Hwy
Princes Hwy
Eumemmerring Park
GMH
South Gippsland Fwy
S38 00.5 E145 14.3
GMH
ALT 1,500 ft
FREQ 118.1
Looking west. Moorabbin Airport is 7NM ahead.
"Moorabbin Tower, Callsign type
GMH altitude received ATIS
inbound."
Optional: "Unfamiliar with Moorabbin."


KEY TO ALTITUDE
500ft to 0ft
1000 ft to 500ft
Straight-in approach or base
Aircraft cleared for a straight–in approach or base should report as instructed by ATC:
Callsign "base," "final" [or position].
Centre Dandenong Rd
DFO
13R
13L
17R
17L
Capital
35L
35R
31L
31R
MB GND 119.9
CAUTION
Runway 13 & 17 are easily confused
Boundary Rd
Downwind
Aircraft joining downwind should report commencing the downwind leg at 1,000ft:
Callsign type downwind,
"full stop," "touch-and-go," etc. [intentions]
Lower Dandenong Rd
Kingswood
Braeside Park
Westall Road Extension
Clarke Rd Tip
BMX Track

GMH

The GMH (General Motors Holden) GAAP approach point is situated 7NM east of Moorabbin. It can be identified as an old industrial complex with a dark sawtooth roof. Furthermore it is at the intersection where the Monash Freeway (formerly South Eastern Freeway) becomes the South Gippsland Freeway and the Princes Highway crosses. Passing over these features you should see Moorabbin airport to the west and Sandown Park Racecourse to the north-west.

Obtain Moorabbin ATIS information on 120.9 or 398 NDB well before arriving at GMH. It is advisable to assess potential traffic in your vicinity by listening to Moorabbin tower on 118.1 before reporting at GMH. Keep a good lookout for other traffic also reporting at GMH.

GENERAL CIRCUIT JOINING INSTRUCTIONS:

1. A **Circuit Joining Instruction** is a clearance to enter the control zone. It also tells the pilot how to enter the circuit. **For example,** *"ZFR, join base RWY 35 Right, report at Parkmore"* or *"ZFR join base RWY 17Left."*

2. **Once you receive a circuit joining instruction,** descend to reach circuit altitude (1,000ft on Moorabbin QNH) by the control zone boundary (3NM Moorabbin). If instructed to join upwind or overfly, the tower will assign you an altitude (normally 1,500ft).

3. In **sequencing aircraft** ATC will indicate the position of the preceding aircraft, by reference to a leg of the circuit or a clock bearing. The aircraft may be described as a specific type or in general terms (eg, Cessna or Twin). For example, *"ZFR, follow the Cessna on late downwind"*.
ATC may issue a sequence number. A sequence number specifies the landing order with respect to any preceding traffic.

4. **Care should be taken to maintain your position** in the sequence and to ensure you do not "cut inside" other traffic. The instruction **"Follow"** requires you to sight the preceding aircraft, and regulate your speed and approach path to achieve lateral separation. If the preceding aircraft cannot be sighted and identified, you must advise ATC. **If in doubt, tell the Tower.**

5. **Radio calls should only include the mandatory readbacks**, due to the large number of movements at Moorabbin. Refer AIP GEN 3.4-12 (4.4)

6. **Exercise caution on base and final.** Other aircraft may be on simultaneous final approaches to Moorabbin's parallel runways. It is imperative that you:
   - **Identify any traffic on the opposing base leg and monitor their position while you are turning onto final;**
   - **Do not overshoot when turning final; and**
   - **Do not drift off the extended runway centreline once established on final.**

CTAF[R]

CTAF[R]: Make all necessary radio calls as per AIP, ERSA and pages 19-20 of this guide. Overfly the airport at 1,500 feet. Once you have selected the appropriate runway, fly at least three legs of the circuit. In nil–wind conditions the preferred runway is 35R – followed by RWY17L, then RWY 13L and 31R. (Runway 13L and 31R are equal preference.) Runway 04/22 is not available unless operationally required. Touch-and-go circuits are not permitted on 04/22.
Refer to AIP ENR 1.1-82 (61.6) for the requirements for making straight-in approaches at uncontrolled aerodromes with CTAF[R] procedures. AWIS is available on 120.9MHz.

COMMON GAAP READ BACKS

1. **Route clearance**
2. **Runway clearances**
3. **Assigned runway**
4. **Level/altitude**
5. **QNH**
6. **Transponder code**
7. **Radio frequency**
8. **Turns/headings**
9. **Speed**
10. **Holding instructions**

(Refer AIP GEN 3.4-12 (4.4))

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AT A GLANCE	
Elevation	282 feet
Location	S37 43.7 E144 54.1
ML APP	132.0
ML DEP	118.9 129.4
Tower	125.1
Ground	121.9
ATIS	119.8 or 356
AWIS	133.2
NDB	356
FUEL	129.9

ESSENDON AIRPORT

EssendonAirport is 6NM to the north-west of the city of Melbourne, and 4.5NM south-east of Melbourne International Airport. Essendon Airport is located within the Melbourne Control Zone.

Essendon has two crossing runways 08/26 and 17/35. The longest runway is 08/26 at 1,921m.

Airport operator: Essendon Airport Limited
Address: Building 250, English St, Essendon Airport, Victoria, 3041
Telephone: 03 9948 9300
Fax: 03 9948 9330

ESSENDON CLASS C PROCEDURES

For more detailed information, refer to AIP ENR and ERSA.

ESSENDON

Essendon Airport is located in the Melbourne Class C Control Zone (CTR). Essendon is not a GAAP aerodrome. Operations and services are in accordance with the table at AIP ENR 1.4-1

Because each aerodrome is unique, special procedures have been developed to take local conditions into account. These special procedures are listed in ERSA and must be read in conjunction with the AIP.

Essendon Tower is closed at certain times, generally late at night. When this occurs, that part of Melbourne Control Zone (CTR) allocated to Essendon Tower, remains class C airspace and is controlled by Melbourne Approach and Departures.

The following explanation of the special procedures is in two sections. The first section refers to normal procedures when the Tower is active and the second section details procedures when the Tower is closed.

Essendon Tower controls the south eastern quadrant of the Melbourne CTR and the adjacent Class C steps, up to and including 2,000 feet. Aircraft wishing to operate in this airspace (known as Essendon Tower Airspace) must contact Essendon Tower approaching any of the VFR Approach Points immediately adjacent to the Melbourne CTR, designated on the Melbourne VTC. (The following VFR Approach Points are covered in this guide: Albert Park Lake, Doncaster Shoppingtown, Kalkallo, Station Pier, Westgate Bridge, and Yan Yean Reservoir).

The prime objective of Essendon ATC is to separate general aviation traffic from airline traffic operating at Melbourne Airport. In doing so, from time to time your planned route or altitude may not be available.

Due to the proximity of Melbourne Airport, it is essential that pilots comply accurately with tracking instructions.

Misidentification of Melbourne and Essendon Airport is possible. If you are unsure, ask for help early. Essendon Airport's beacon flashes white every four seconds. Melbourne Airport's beacon flashes alternate white/green.

VFR aircraft will normally be cleared on segregated tracks, and traffic information provided when the proximity of other aircraft warrants. The provision of traffic information does not absolve you from keeping a good lookout and manoeuvring as required to avoid other traffic.

There is a probability of significant wind shear in strong northerly and southerly winds.

The circuit altitude is 1,300 feet on Essendon QNH, and ATC will specify the circuit direction.

READ BACK REQUIREMENTS

As in any ATC environment, certain items of a clearance or instruction must be read back. Those items applicable to Essendon are:

1. Any clearances or instructions to hold short of, enter, land on, take-off on, cross, or backtrack on any runway;
2. Assigned runway, altimeter setting directed to a specific aircraft, SSR codes, radio and radio navigation aid frequency instructions; and
3. Level instructions, direction of turn, heading and speed restrictions.

TOWER OPEN

The following procedures apply when Essendon Tower is active.

FLIGHT PLANNING DETAILS

All flight plan details should be submitted to the briefing office by NAIPS, fax or telephone. Details may be taken by Tower/Ground via radio as a last priority. Details involving flight into Approach /Departures airspace are generally not accepted by Essendon via radio as delays in processing of up to 30 minutes can occur.

Aircraft **inbound** to Essendon airspace that have not submitted flight plan details are requested to notify the Tower of "flight details" prior to inbound clearance request.

Aircraft **outbound** from Essendon may advise details to Essendon Ground, preceded by "flight details". Outbound clearance will be given via the most appropriate exit point.

TRAFFIC HOLDING FUEL

Traffic holding fuel is required at the following times:

Monday to Friday
18.45 to 19.45 EST/HDS

If you plan to arrive during these times you should carry a minimum of 10 minutes holding fuel.

CLEARANCES

You will require a specific airways clearance prior to operating into and out of Essendon.

Individual clearances are required for:

1. Entering and departing the CTR;
2. Taxi, take-off and landing;
3. Crossing, entering or backtracking of any runways, active or not.

All airways clearance requests for **departing aircraft** are to be made on ground frequency 121.9

Do not deviate from cleared track and level unless instructed to do so by ATC. A **visual approach** will be issued to you prior to circuit entry. This instruction will contain circuit instructions eg, straight-in, left/right base or left/right circuit.

You must not conduct a VFR flight in the Essendon Tower Airspace when VMC does not exist. VMC does not exist at Essendon when more than scattered (SCT) cloud below 2,300 feet, or visibility below 5,000 metres, is notified on the ATIS.

At your request, ATC may issue a **Special VFR clearance** to allow you to conduct operations within the CTR in conditions less than VMC (AIP ENR 1.2). Special VFR is not permitted for circuit operations. It is your responsibility to maintain at least 1,000 feet obstacle clearance while en route. Delays may be experienced if IFR traffic is being processed.

Due to the proximity of Melbourne Airport, it is essential that you comply with tracking instructions. ATC may request a **"turn close to the field"** or an **"early turn"** on departure. You should endeavour to commence these turns by the airfield boundary.

A **start clearance** is required for aircraft:

1. Departing Essendon for Melbourne;
2. Departing Essendon for airwork in the Melbourne Terminal Area; and
3. Departing Essendon for Moorabbin above 2,000ft.

Requests for a **touch-and-go** landing should be made on first contact with the Tower.

Requests for operations on the **non-active runway** may be accommodated if traffic permits.

Night VFR departures may be required to climb within the Essendon circuit to the south or east until the minimum vectoring altitude of 2,000 ft is reached.

Orbits of Melbourne CBD (MCTY) are available. Contact Essendon Tower outside controlled airspace (OCTA). Do not overfly MCTY at 1,500ft, i.e. remain outside the lateral limits. Overfly at 2,000ft is permitted.

Expect delays for city orbits when outside tower hours of operation.

Note 1: 1,500ft is outside the CTR south of MCTY. Caution: Traffic outside controlled airspace (OCTA) on other frequencies, including helicopters flying to and from Helicopter Landing Site (HLS) on and adjacent to the Yarra River.

Note 2: Caution Yarra CTAF up to 1000 ft, frequency 132.1.

AERODROME INFORMATION (ATIS/AWIS)

Automatic Terminal Information Service (ATIS) is broadcast on 119.8, and on the NDB frequency (356). AWIS is available on 133.2.

When Essendon Tower is closed, the ATIS will broadcast information ZULU which will also contain information regarding the control service available from Melbourne Approach. (Refer to operations outside Tower hours and ERSA.)

RUN-UP/HOLDING BAYS

Holding bays are available for run-ups for Runway 26 and 17. There are no holding bays for Runways 35 or 08. Ground will advise, on taxi, where to conduct run-ups for Runways 35 or 08.

RUNWAY NOMINATION

ATC will nominate runways in accordance with noise abatement procedures and in association with Melbourne Airport traffic. The nominated runway may not be into wind, but conditions permitting, ATC will normally nominate a runway where the crosswind and downwind components do not exceed 15 knots and 5 knots respectively for a dry runway, or 10 knots crosswind and zero downwind for a wet runway.

NOISE ABATEMENT PROCEDURES

Essendon airport is situated in a noise-sensitive area and it is important that all operators conduct their operations with this in mind. If uncertain of the requirements for your aircraft type check AIP and DAP for more detailed information.

TRANSPONDER

Aircraft operating in Essendon Tower airspace shall **Squawk 0100** unless assigned another code.

TAXIING AFTER LANDING

After landing, you should vacate the runway using the **first available taxiway**. Remain on the Tower frequency (125.1) after landing until you are clear of the active runway. Contact Essendon Ground (121.9) when clear of the runway for taxi clearance, and **advise intentions**.

TRAINING FLIGHTS

All aircraft planning training or airwork within Melbourne Terminal Airspace require prior ATC approval. Phone (03) 9235 7337 or Essendon Tower (03) 9374 1678 if within Essendon Tower airspace.

RESTRICTION ON TYPES

To conduct training at Essendon your aircraft must be propeller driven and its maximum take-off weight (MTOW) must not exceed 5,700kg.

TOWER CLOSED

The following procedures apply when Essendon Tower is closed.

ESSENDON TOWER OPERATING HOURS

Essendon Tower is open at the following times:

Monday to Friday
0615 to 2200 (EST/HDS)

Saturday
0700 to 2200 (EST/HDS)

Sunday
0800 to 2200 (EST/HDS)

These times are subject to change.
Check ERSA and NOTAM.

No training between 2200 and 0600 (EST/HDS) (refer ERSA)

Outside these hours the airspace remains Class C, under the control of Melbourne Approach/ Departures.

FLIGHT PLANNING

When the Tower is closed you must lodge written flight-notification details prior to your flight.

CLEARANCES

When the Tower is closed all on-ground communication shall be on Melbourne Clearance Delivery 118.45. (Radio Failure on ground: continue to transmit your intentions, return to the apron area and phone Melbourne ATC on 03 9235 7337.)

Aircraft departing from Essendon must contact Melbourne Clearance Delivery on 118.45 prior to departure for start, airways clearance and departure instructions.

Clearance will not be given for taxiing, landing or take-off.

The pilot in command has the sole responsibility for aircraft ground movement and avoidance of other aircraft and obstacles.

Note: Recommend minimum of 10 minutes holding fuel outside of tower hours of operation.

Aircraft requesting clearance to enter Melbourne CTR contact Melbourne Radar on 135.7 for inbound airways clearance.

Landing aircraft must notify Melbourne Clearance Delivery on 118.45 when clear of the landing runway, as soon as possible after landing.

Failure to do so will result in SAR action and significant delays to following traffic.

Keep a good lookout for traffic.

RUNWAYS

Do not use the runways as taxiways or for run-ups. Clearance is not required to cross a runway.

Preferred runways for noise abatement are different to those when Essendon Tower is open. Melbourne Approach will nominate the runway to use as per AIP DAP noise abatement procedures, unless you advise an "operational requirement" to use another runway, or the presence of other traffic warrants another runway.

DEPARTURE

Do not enter the departure runway until departure instructions are issued.

Commence take-off within three minutes of the time you are issued with departure instructions. Otherwise you must obtain new departure instructions.

LIGHTING

Essendon does not have pilot-activated lighting (PAL) facilities. Check ERSA and NOTAM for lighting facilities.

AERODROME INFORMATION

Essendon AWIS available on 133.2

The current on-field wind will also be advised by Melbourne Approach, as well as the Melbourne Airport QNH and temperature.

DEPARTURE TO CLASS C OR G AIRSPACE

Obtain Essendon ATIS (119.8 or 356)

"Essendon Terminal Information [ ]**,** *runway* [ ]*,*
wind [ ]*, crosswind* [ ]*, cloud* [ ]*,*
visibility [ ]*, temperature* [ ]*, QNH* [ ]*,*
remarks [ ]*."*

Taxi Call (121.9)

"Essendon Ground,

call sign [ ]**, aircraft type** [ ]**,** *received* [ ]**,**
destination [ ]**,** *request taxi. "*

NOTE: A taxi clearance authorises you as far as the holding bays. You must obtain a clearance to cross a runway.

Flight Details (121.9)

If you have not submitted flight details, you must inform Essendon ground that you are about to give them your details with your request for taxi clearance. For example:

PILOT: " Essendon Ground, ZFR, flight details."
ATC: "ZFR, ground, go ahead details."
PILOT: "ZFR a PA28 for Wagga, 3 POB, received Bravo, request taxi clearance."

Airways Clearance (121.9)

Request clearance when you are ready to copy.

Ready Call (125.1)

Remain in the holding bays then make a "ready" call on 125.1:

"*Essendon Tower***, Call Sign** [ ] *Ready.***"**

Squawk code 0100 unless assigned another code

ESSENDON INBOUND RADIO CALLS

Obtain Essendon ATIS (119.8 or 356)

Before reaching the VFR approach point, obtain ATIS and **squawk code 0100.**

"Essendon Terminal Information ____, *runway* ____, *wind* ____, *crosswind* ____, *cloud* ____, *visibility* ____, *temperature* ____, *QNH* ____, **remarks** ____ *"*

Inbound Radio Call (125.1)

"*Essendon Tower***, call sign** ____**, aircraft type** ____**,** **Position** ____**, altitude** ____**,** *received* ____**,** *request clearance."*

Circuit Entry Instructions

Maintain your assigned level until the Tower clears you for a visual approach. This will allow you to manoeuvre the aircraft in the circuit. You should respond with standard read-back phraseology.

Landing Clearance

You will be given a clearance to land by the Tower. You must receive a landing clearance before you land. You should respond with standard read-back phraseology.

After Landing

Remain on Tower frequency until clear of all active runways. Vacate onto first available taxiway, then call Essendon Ground on 121.9:

"Essendon Ground, **Call sign** ____**,** *request taxi clearance***,** **intentions** ____**."** If required, request *"taxi guidance"*.

Cancel SARTIME with CENSAR (ph: 1800 814 931), or Flightwatch (124.95) when phone not available.

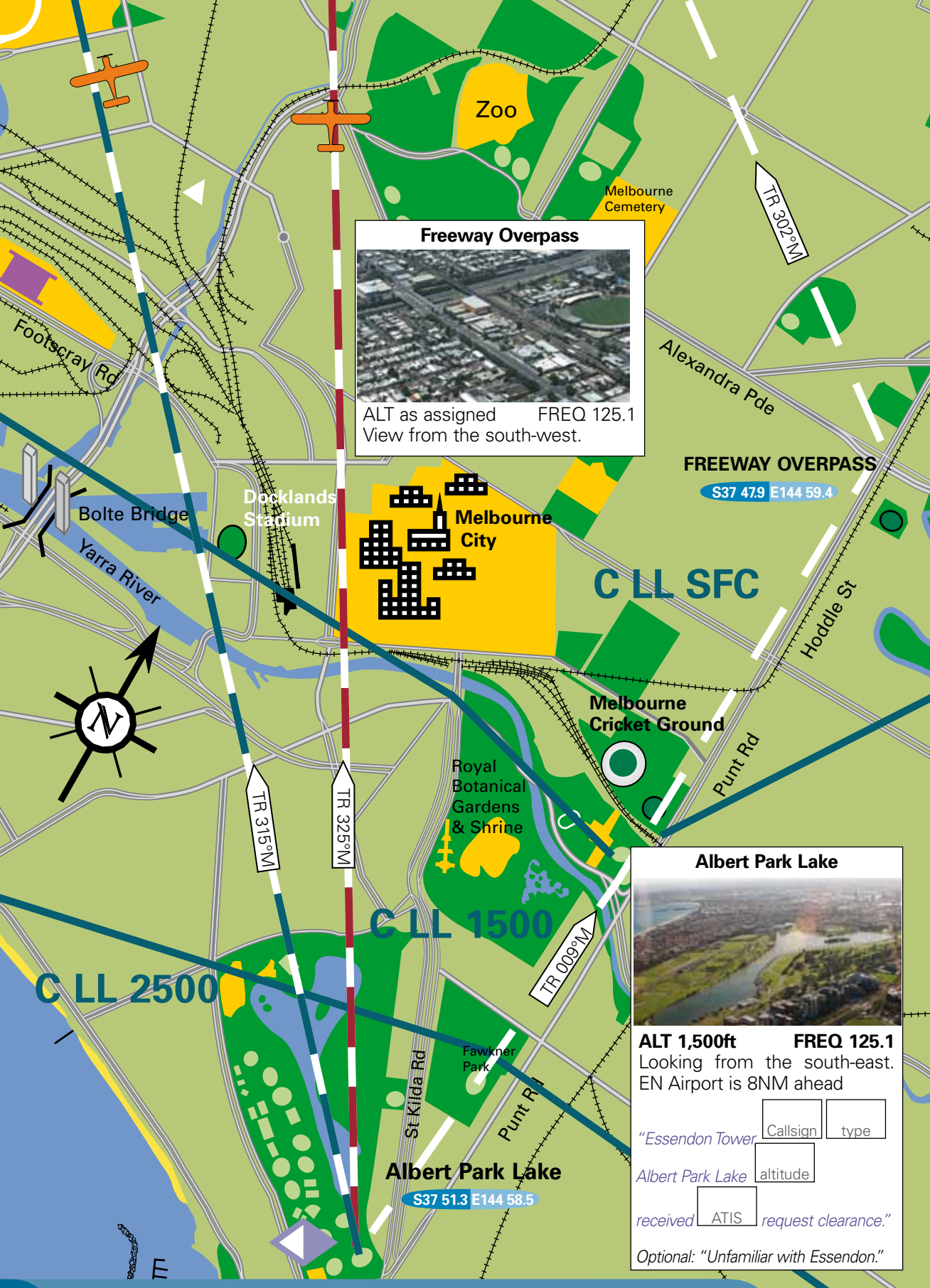
ESSENDON INBOUND FROM ALBERT PARK LAKE

Flemington Racecourse

ALT as assigned FREQ 125.1

Moonee Valley Racecourse

ALT as assigned FREQ 125.1


Zoo
Melbourne Cemetery
TR 302°M
Freeway Overpass
ALT as assigned FREQ 125.1
View from the south-west.
Footscray Rd
Alexandra Pde
FREEWAY OVERPASS
S37 47.9 E144 59.4
Bolte Bridge
Docklands Stadium
Melbourne City
Yarra River
C LL SFC
Hoddle St
Melbourne Cricket Ground
Punt Rd
Royal Botanical Gardens & Shrine
TR 315°M
TR 325°M
C LL 1500
TR 009°M
C LL 2500
Albert Park Lake
ALT 1,500ft FREQ 125.1
Looking from the south-east.
EN Airport is 8NM ahead
"Essendon Tower, Callsign type
Albert Park Lake altitude
received ATIS request clearance."
Optional: "Unfamiliar with Essendon."
Fawkner Park
St Kilda Rd
Punt Rd
Albert Park Lake
S37 51.3 E144 58.5

ESSENDON INBOUND FROM ALBERT PARK LAKE

ALBERT PARK LAKE (APL)

The Albert Park Lake VFR approach point is a distinctive feature located south east of Melbourne City, just inland from Port Phillip Bay. It has a motor racing track within the park boundary.

Clearance will be issued by Essendon Tower (125.1). For example, "Cleared Albert Park Lake to Freeway Overpass. From Freeway Overpass track direct to Essendon. Maintain 1,500 feet [or 2,000 feet]."

NOTE: From Albert Park be prepared to go to Station Pier (SNP) or Westgate Bridge (WES) OCTA.

CAUTION: Do not overfly Melbourne City.

Albert Park Lake: Looking north. Do not fly over the central business district (visible near the top of the photograph).

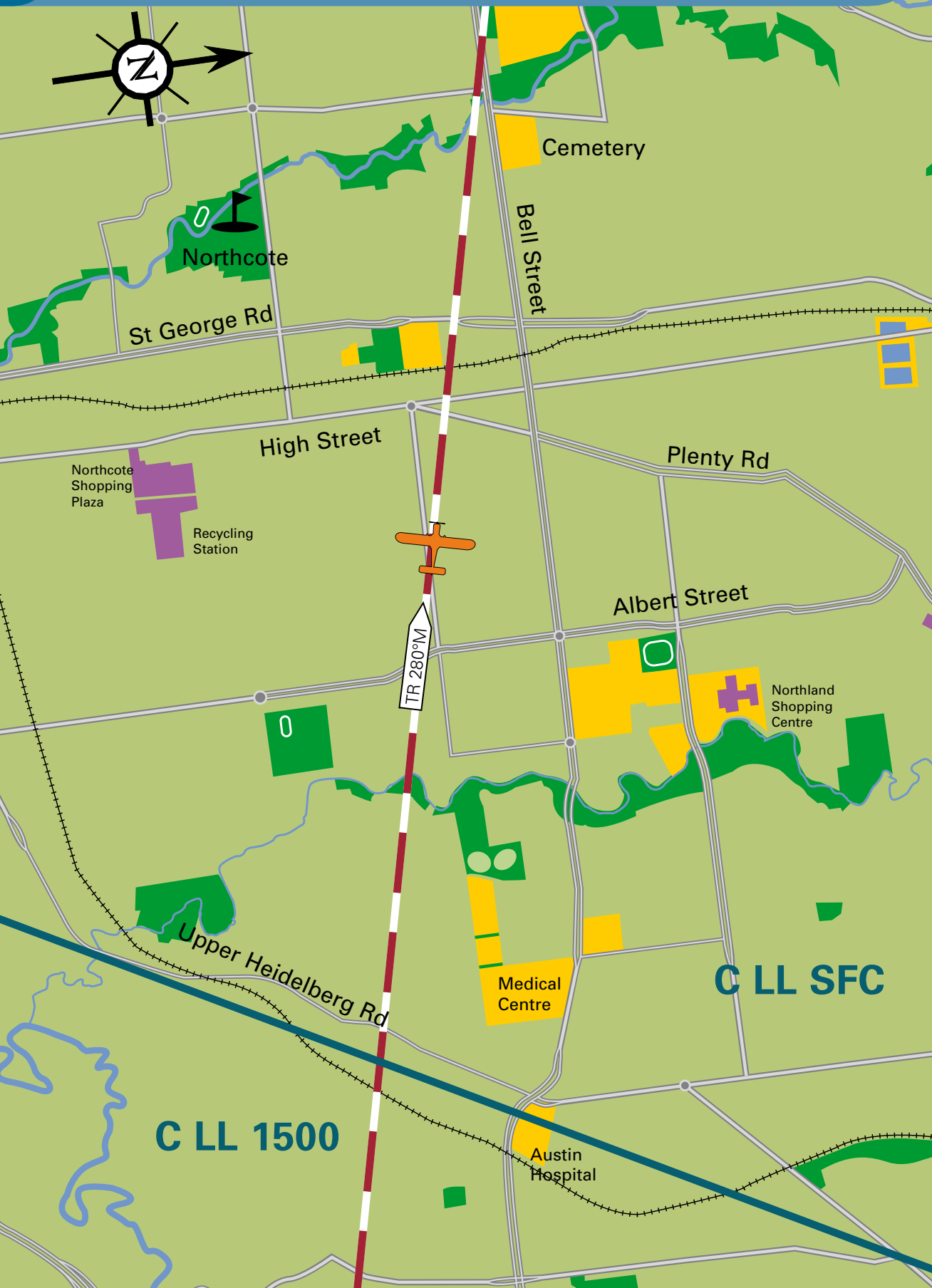
GENERAL TRACKING AND CIRCUIT JOINING INSTRUCTIONS

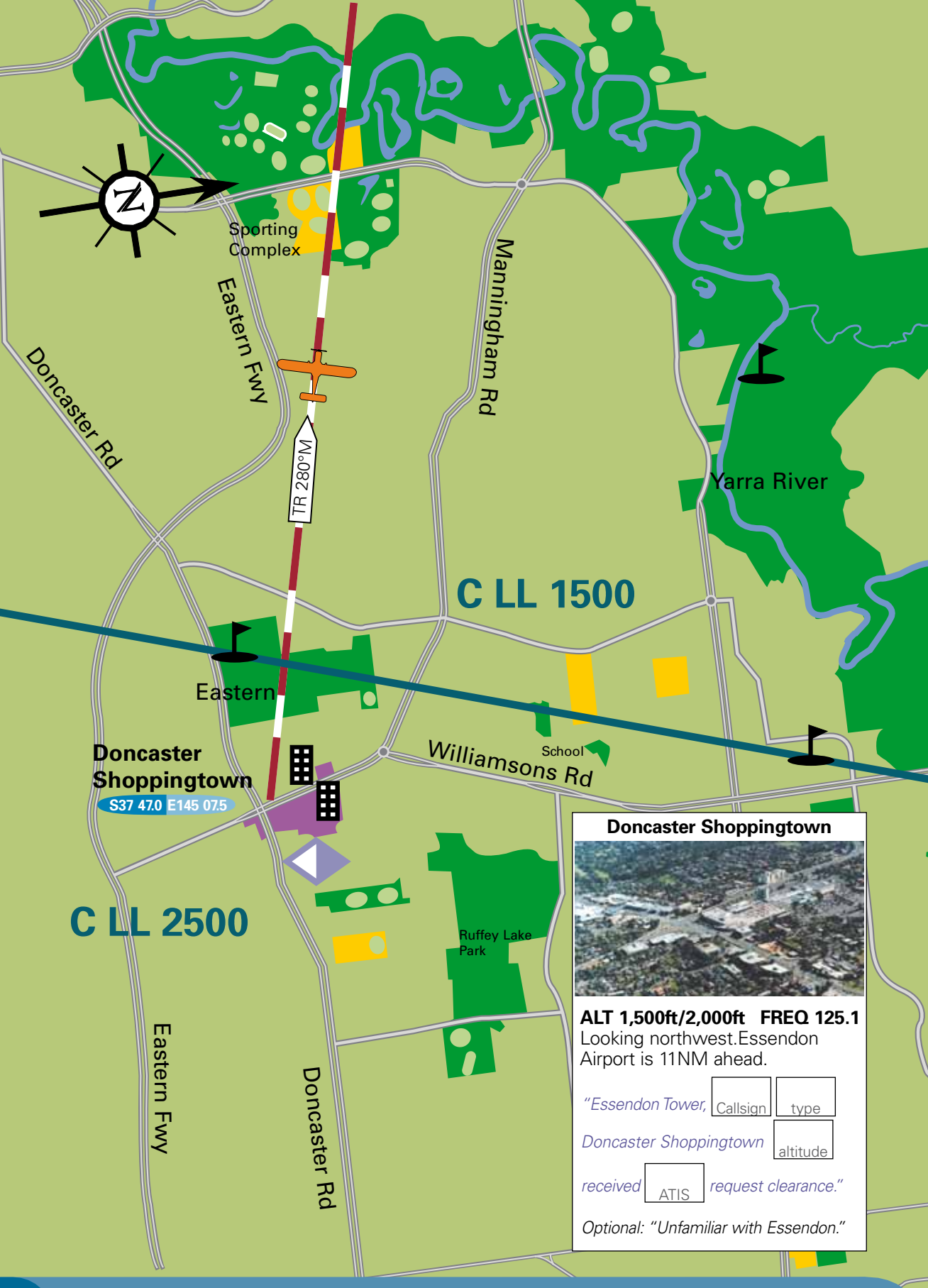
1. **Airways Clearance:** Expect a track and altitude from the VFR approach point then via an intermediate point to Essendon.
2. **Joining the Circuit:** The tower will issue circuit joining instructions which will consist of a visual approach with specific tracking instructions.
3. **Follow Instructions:** Do not deviate from your cleared track or altitude until a clearance for a visual approach is issued.
4. **Radio calls should only include the mandatory readbacks**, due to the large number of movements at Essendon. Refer AIP GEN 3.4-12 (4.4).

COMMON READ BACKS

1 **Route clearance**
2 **Runway clearances**
3 **Assigned runway**
4 **Level/altitude**
5 **QNH**
6 **Transponder code**
7 **Radio frequency**
8 **Turns/headings**
9 **Speed**
10 **Conditional clearances**
11. **Holding instructions**
(Refer AIP GEN 3.4-12 (4.4))

ESSENDON INBOUND FROM DONCASTER SHOPPINGTOWN





Doncaster Shoppingtown

ALT 1,500ft/2,000ft FREQ 125.1
Looking northwest.Essendon Airport is 11NM ahead.

"Essendon Tower, Callsign type *Doncaster Shoppingtown* altitude *received* ATIS *request clearance."*

Optional: "Unfamiliar with Essendon."


Western Ring Rd
Calder Fwy
Disused Quarry
Westfield Shopping Town
Tullamarine Fwy
08
Essendon
S37 43.6 E144 54.1
17
35
DFO
Bulla Rd
Buckley Street
Tullamarine Fwy
Pascoe Vale Rd
26
Northern
Pascoe Vale Rd
Gaffney Street
Boundary Rd
Tullamarine Fwy
Bell Street
Cemetery
N
Hume Hwy

DONCASTER SHOPPINGTOWN (DSN)

The Doncaster Shoppingtown VFR approach point is a distinctive feature located on slightly higher terrain than the surrounding area. It features two large buildings and a shopping complex with a car-park on the roof.

Normally airways clearance will be issued by Essendon Tower (125.1). For example, "Cleared Doncaster Shoppingtown direct to Essendon. Maintain 1,500 feet [or 2,000 feet]".

Doncaster Shoppingtown: Looking north-west.

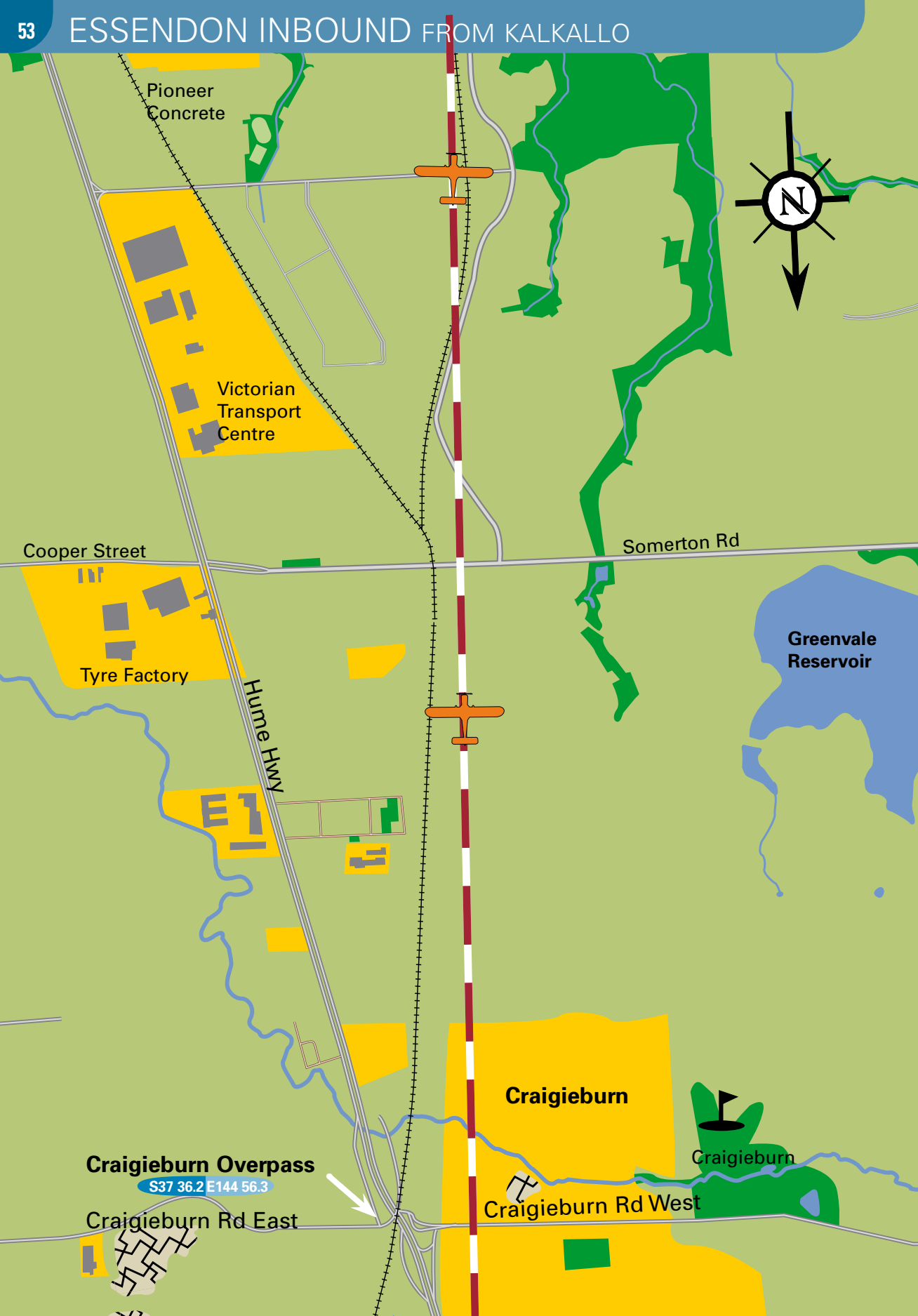
GENERAL TRACKING AND CIRCUIT JOINING INSTRUCTIONS

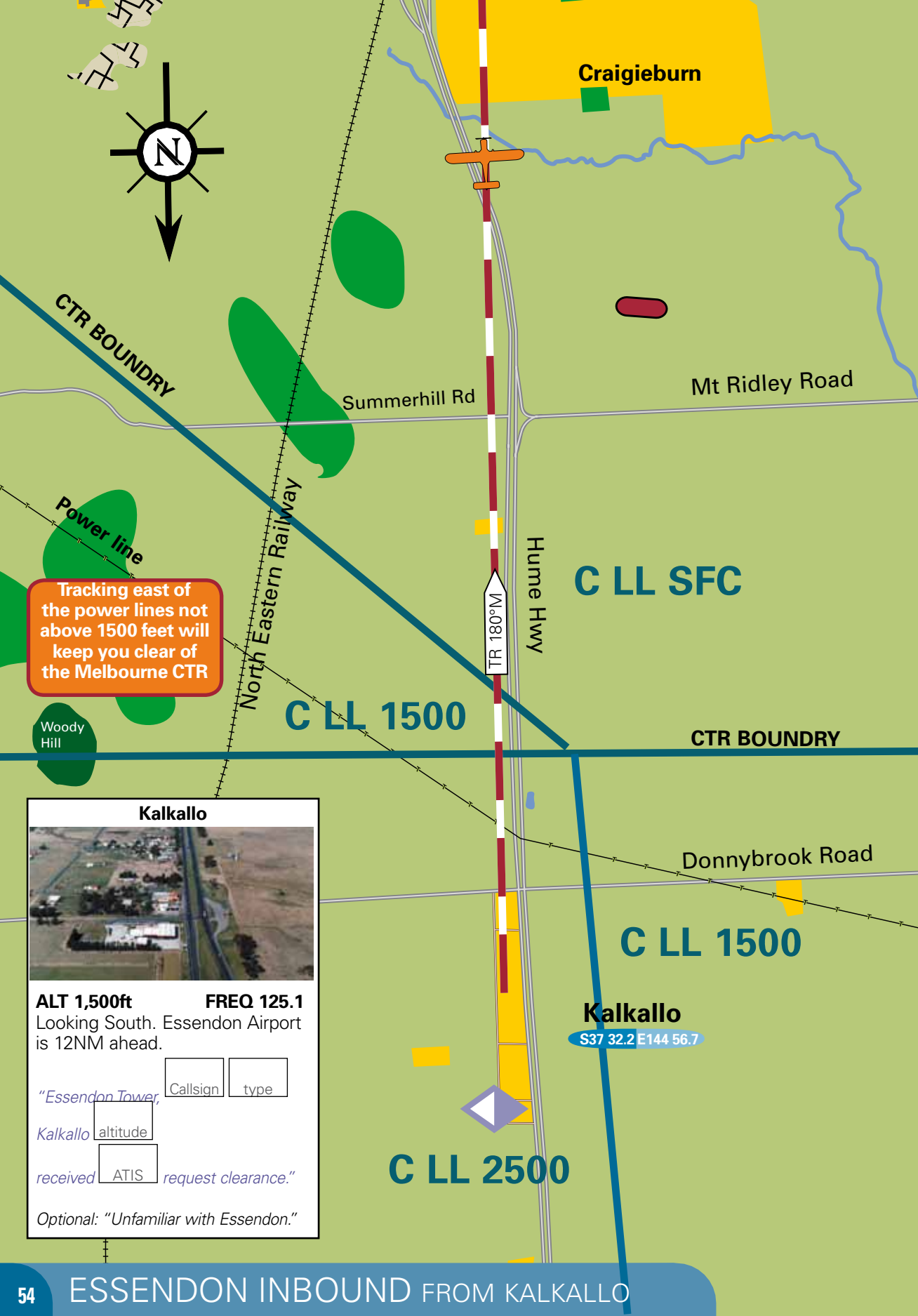
1. **Airways Clearance:** Expect a track and altitude from the VFR approach point then via an intermediate point to Essendon.
2. **Joining the Circuit:** The tower will issue circuit joining instructions which will consist of a visual approach with specific tracking instructions.
3. **Follow Instructions:** Do not deviate from your cleared track or altitude until a clearance for a visual approach is issued.
4. **Radio calls should only include the mandatory readbacks**, due to the large number of movements at Essendon. Refer AIP GEN 3.4-12 (4.4).

COMMON READ BACKS

1 **Route clearance**
2 **Runway clearances**
3 **Assigned runway**
4 **Level/altitude**
5 **QNH**
6 **Transponder code**
7 **Radio frequency**
8 **Turns/headings**
9 **Speed**
10 **Conditional clearances**
11. **Holding instructions**

(Refer AIP GEN 3.4-12 (4.4))


Pioneer Concrete
N
Victorian Transport Centre
Cooper Street
Somerton Rd
Greenvale Reservoir
Tyre Factory
Hume Hwy
E1
Craigieburn
Craigieburn
Craigieburn Overpass
S37 36.2 E144 56.3
Craigieburn Rd East
Craigieburn Rd West



Kalkallo

ALT 1,500ft **FREQ 125.1**

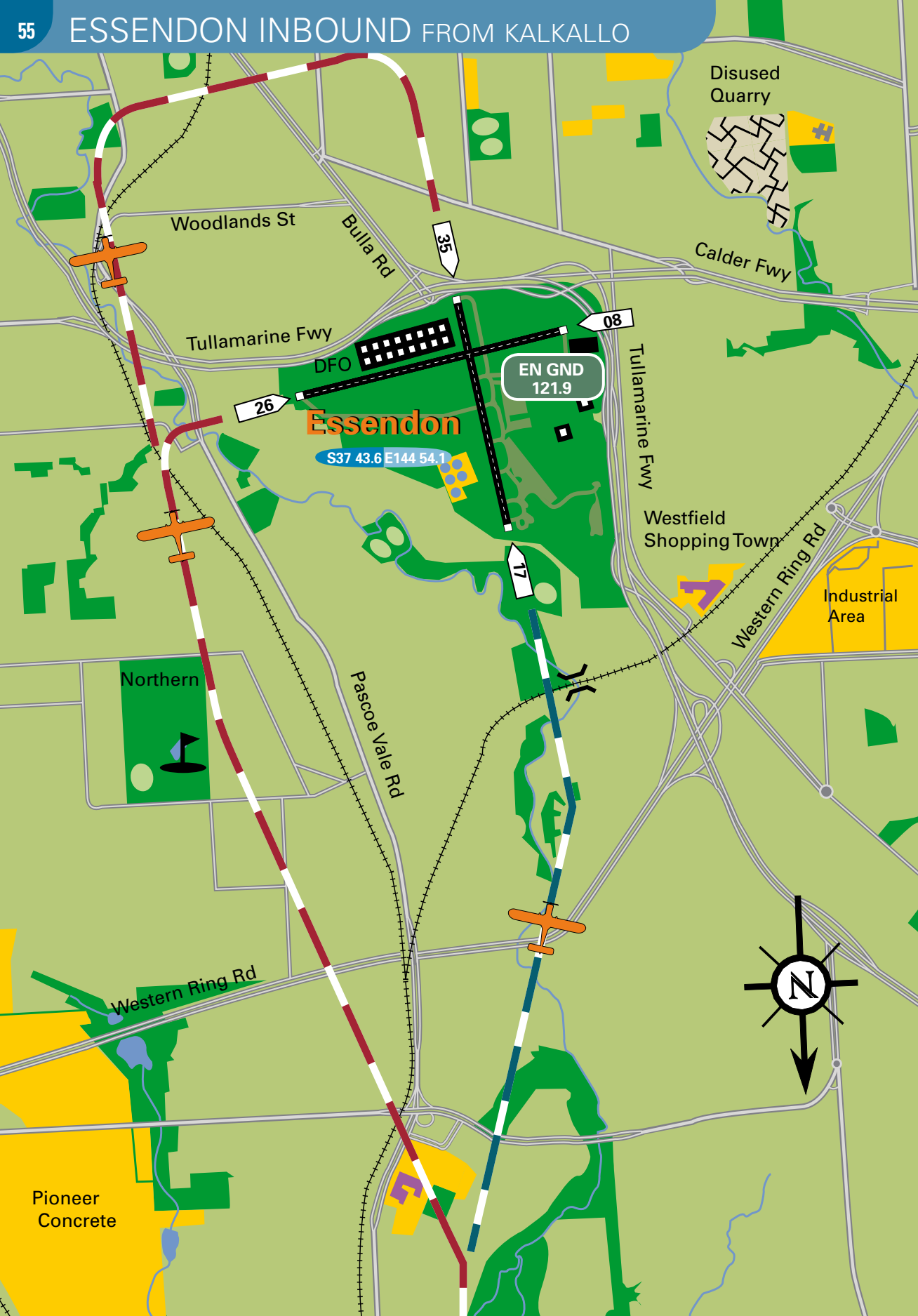
Looking South. Essendon Airport is 12NM ahead.

"Essendon Tower, Callsign type

Kalkallo altitude

received ATIS *request clearance."*

Optional: "Unfamiliar with Essendon."


Disused Quarry
Woodlands St
Bulla Rd
35
Calder Fwy
Tullamarine Fwy
08
DFO
EN GND 121.9
26
Essendon
S37 43.6 E144 54.1
Tullamarine Fwy
Westfield Shopping Town
17
Western Ring Rd
Industrial Area
Northern
Pascoe Vale Rd
N
Western Ring Rd
Pioneer Concrete

KALKALLO (KAO)

The Kalkallo VFR approach point is located at the intersection of the Hume Freeway and a minor east/west road. The freeway is a distinctive north/south divided road. There is a service station and hotel just north of this intersection however it is not easy to see until you are close. Airways clearance availability is subject to Melbourne Airport traffic.

If available airways clearance will be issued by Essendon Tower (125.1). For example, "Cleared Kalkallo direct to Essendon. Maintain 1,500 feet".

You may contact Melbourne Radar prior to Kalkallo to arrange clearance, but Essendon Tower will issue clearance. En route intermediate point is Craigieburn Overpass (CGB). At Craigieburn Overpass (CGB) Greenvale Reservoir and Melbourne airport should be in your two-o'clock position.

If airways clearance is not available, the next probable entry point will be Plenty Locator (PLE) – frequency 218kHz. Also suggest tracking via Doncaster Shopping Town (DSN) or Warrandyte (WRD) east of Melbourne.

Tracking east of the power lines not above 1,500 feet will keep you clear of Melbourne CTR.

Kalkallo: Looking south along the Hume Freeway.

GENERAL TRACKING AND CIRCUIT JOINING INSTRUCTIONS

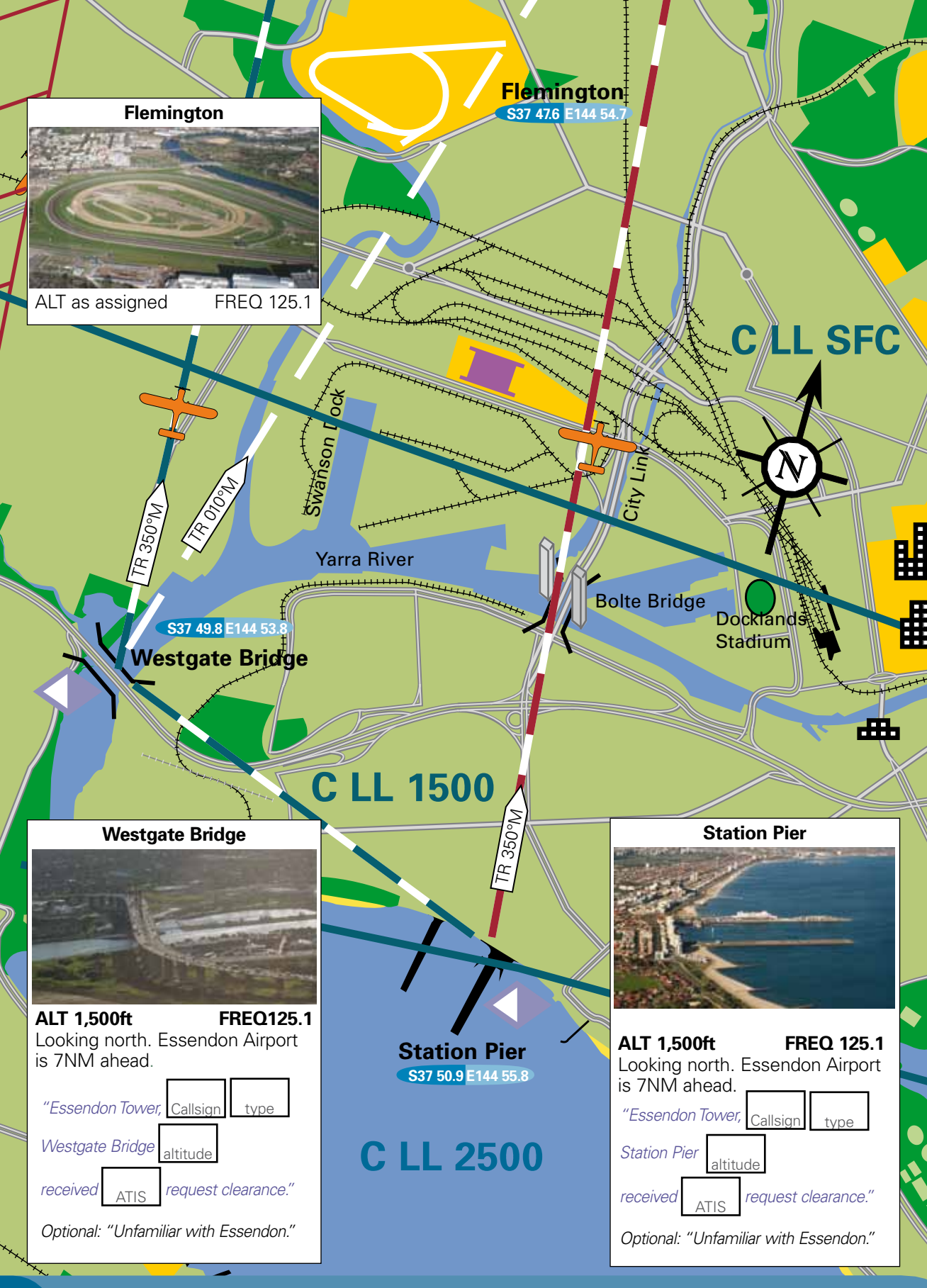
1. **Airways Clearance:** Expect a track and altitude from the VFR approach point then via an intermediate point to Essendon.
2. **Joining the Circuit:** The tower will issue circuit joining instructions which will consist of a visual approach with specific tracking instructions.
3. **Follow Instructions:** Do not deviate from your cleared track or altitude until a clearance for a visual approach is issued.
4. **Radio calls should only include the mandatory readbacks**, due to the large number of movements at Essendon. Refer AIP GEN 3.4-12 (4.4).

COMMON READ BACKS

1 **Route clearance**
2 **Runway clearances**
3 **Assigned runway**
4 **Level/altitude**
5 **QNH**
6 **Transponder code**
7 **Radio frequency**
8 **Turns/headings**
9 **Speed**
10 **Conditional clearance**
11. **Holding instructions**

(Refer AIP GEN 3.4-12 (4.4))


Western Ring Rd
Westfield Shopping Town
Essendon
S37 43.6 E144 54.1
Northern
Tullamarine Fwy
17
Pascoe Vale Rd
Calder Fwy
08
26
DFO
35
Tullamarine Fwy
Bulla Rd
Woodlands St
Mount Alexander Rd
CAUTION
Melbourne Jet traffic.
Do not drift off track.
Moonee Valley Racecourse
ALT as assigned
FREQ 125.1
Department of Defence Explosive Factory
Highpoint Shopping Centre
Moonee Valley Racecourse
S37 46.0 E144 56.0



Flemington

ALT as assigned FREQ 125.1

Westgate Bridge

ALT 1,500ft **FREQ125.1**

Looking north. Essendon Airport is 7NM ahead.

"Essendon Tower, Callsign type

Westgate Bridge altitude

received ATIS *request clearance."*

Optional: "Unfamiliar with Essendon."

Station Pier

ALT 1,500ft **FREQ 125.1**

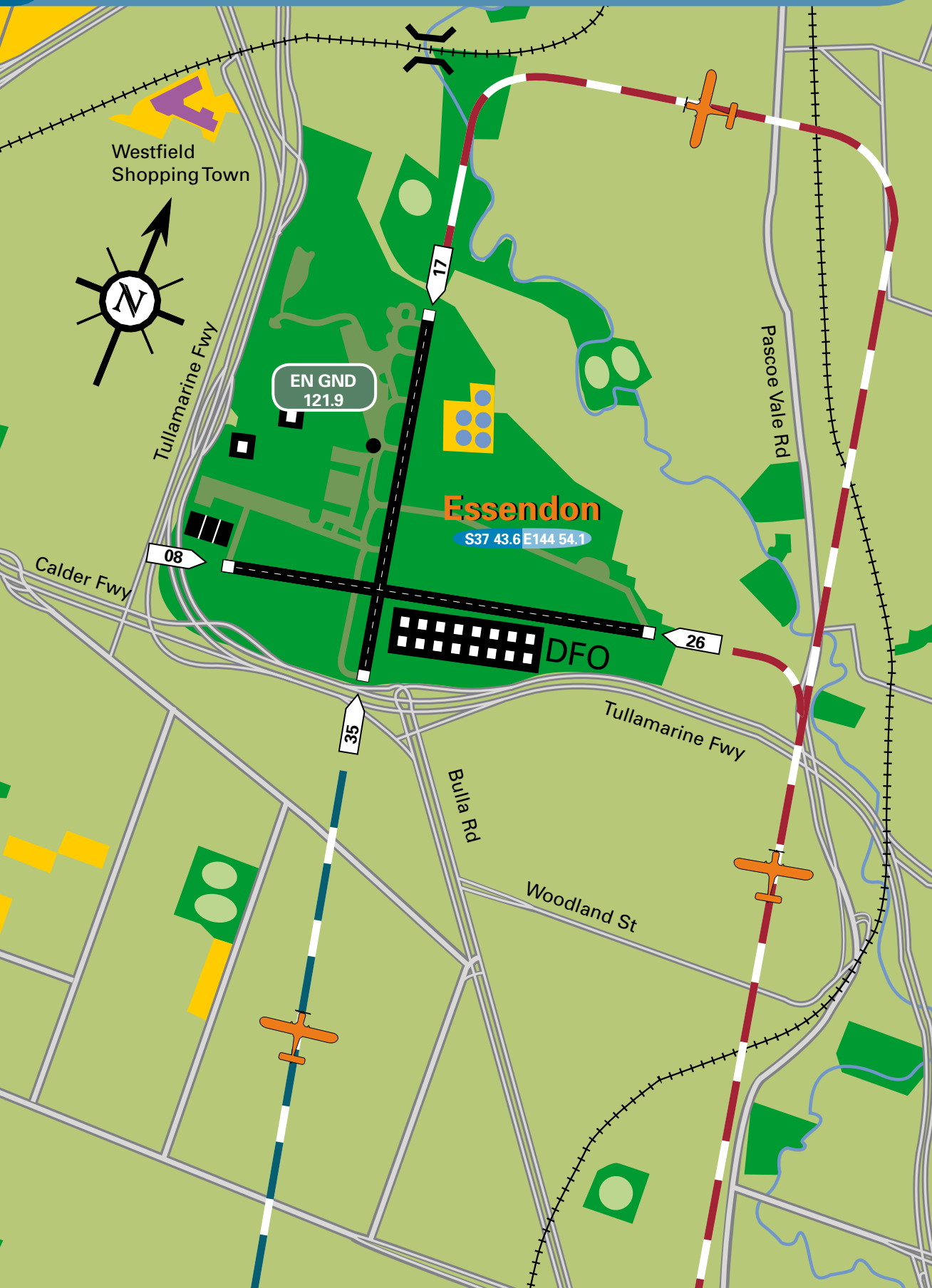
Looking north. Essendon Airport is 7NM ahead.

"Essendon Tower, Callsign type

Station Pier altitude

received ATIS *request clearance."*

Optional: "Unfamiliar with Essendon."


Westfield
Shopping Town
N
EN GND
121.9
Tullamarine Fwy
17
Pascoe Vale Rd
Essendon
S37 43.6 E144 54.1
08
Calder Fwy
26
DFO
35
Tullamarine Fwy
Bulla Rd
Woodland St

STATION PIER (SNP)

Station Pier is one of two large piers which extend into Port Phillip Bay, south-east of the city. The Station Pier VFR approach point is the eastern pier. It is a distinctive feature with an apartment development close by. Airways clearance will be issued by Essendon Tower (125.1). Eg." Cleared Station Pier to Moonee Valley Racecourse then direct to Essendon. Maintain 1,500 ft [or 2,000 ft]."

It is important that you track over Station Pier and properly identify Moonee Valley Racecourse (not Flemington) due to segregation with possible traffic to your left on the Essendon to Westgate Bridge track.

Station Pier: Looking north. Station pier is on the right (to the east).

WESTGATE BRIDGE (WES)

The Westgate Bridge VFR approach point is the busiest approach point for Essendon, with traffic tracking to and from Essendon. A lot of Essendon traffic also tracks via Westgate Bridge to Point Cook aerodrome.

Airways clearance will be issued by Essendon Tower (125.1). For example, "Cleared Westgate Bridge direct to Essendon. Maintain 1,500ft [or 2,000ft]."

Call at Williamstown (WMS) to allow for any variables and be prepared to track via Station Pier.

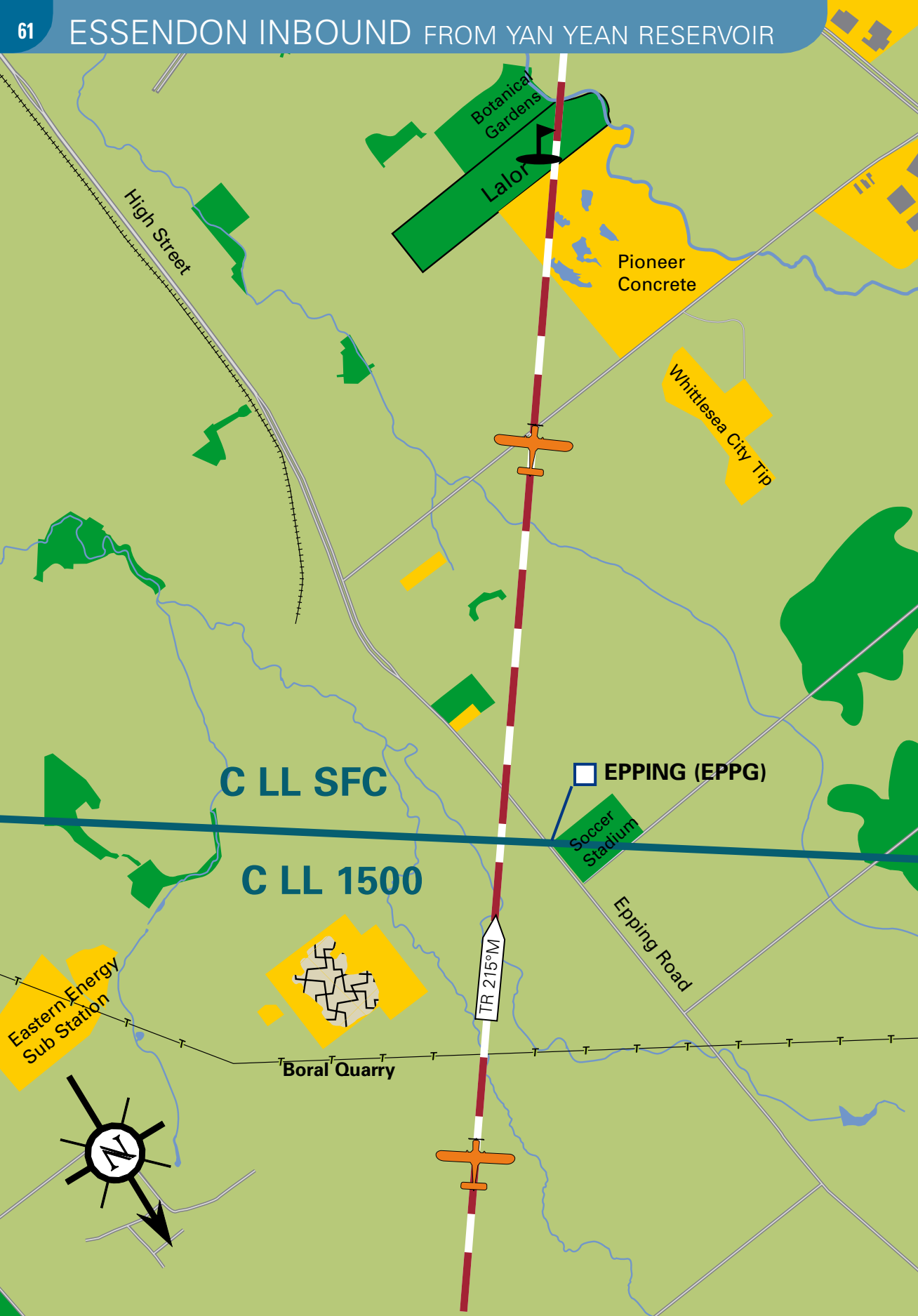
Caution: On the Westgate Bridge to Essendon track, Melbourne jet traffic is immediately above and to the left, and Essendon outbound traffic to the right. **Do not drift off track.**

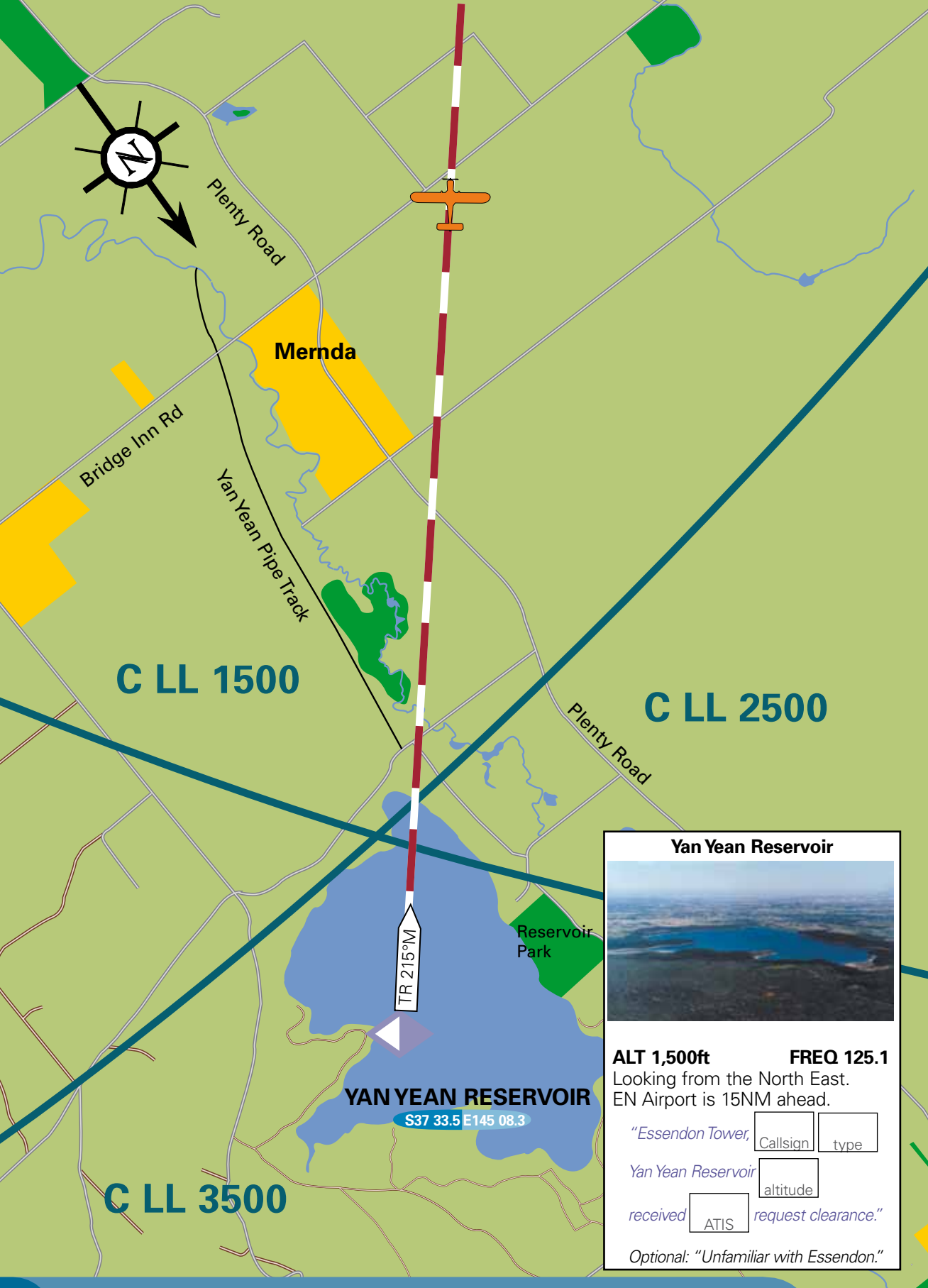
Westgate Bridge: Looking north.

GENERAL TRACKING AND CIRCUIT JOINING INSTRUCTIONS:

1. **Airways Clearance:** Expect a track and altitude from the VFR approach point then via an intermediate point to Essendon.
2. **Joining the Circuit:** The tower will issue circuit joining instructions which will consist of a visual approach with specific tracking instructions.
3. **Follow Instructions:** Do not deviate from your cleared track or altitude until a clearance for a visual approach is issued.
4. **Radio calls should only include the mandatory readbacks**, due to the large number of movements at Essendon. Refer AIP GEN 3.4-12 (4.4).

ESSENDON INBOUND FROM YAN YEAN RESERVOIR





Yan Yean Reservoir

ALT 1,500ft **FREQ 125.1**

Looking from the North East.
EN Airport is 15NM ahead.

"Essendon Tower, Callsign type
Yan Yean Reservoir altitude
received ATIS *request clearance."*

Optional: "Unfamiliar with Essendon."

ESSENDON INBOUND FROM YAN YEAN RESERVOIR

YAN YEAN RESERVOIR (YYN)

The Yan Yean Reservoir VFR approach point is a distinctive feature. Airways clearance availability, like all other approach points, is subject to Melbourne Airport traffic.

Airways clearance will be issued by Essendon Tower (125.1). For example, "Cleared Yan Yean direct to Essendon. Maintain 1,500 feet [or 2,000 feet]". An intermediate point is Epping Township (EPPG), just inside the CTR on track. You should then cross a major intersection where the Hume Highway and Western Ring Road cross 4NM North East of Essendon.

If an airways clearance is not available, a probable entry point will be the Plenty Locator (PLE) – frequency 218kHz. To find Plenty you will need an ADF. Then tracking south you will see a main road (Plenty Rd) on your right. Do not follow it in to the CTR.

A good intermediate feature is the Greensborough Shopping Centre about 1NM North of Plenty Also suggest tracking via Doncaster Shopping Town (DSN) or Warrandyte (WRD) east of Melbourne.

Note: CTA level is 2500 ft stepping down to 1500 ft with Melbourne Airport traffic above.

Yan Yean Reservoir: View to the south-west. Melbourne City is just visible on the horizon.

GENERAL TRACKING AND CIRCUIT JOINING INSTRUCTIONS

1. **Airways Clearance:** Expect a track and altitude from the VFR approach point then via an intermediate point to Essendon.
2. **Joining the Circuit:** The tower will issue circuit joining instructions which will consist of a visual approach with specific tracking instructions.
3. **Follow Instructions:** Do not deviate from your cleared track or altitude until a clearance for a visual approach is issued.
4. **Radio calls should only include the mandatory readbacks**, due to the large number of movements at Essendon. Refer AIP GEN 3.4-12 (4.4).

COMMON READ BACKS

1 **Route clearance**
2 **Runway clearances**
3 **Assigned turnway**
4 **Level/altitude**
5 **QNH**
6 **Transponder code**
7 **Radio frequency**
8 **Turns/headings**
9 **Speed**
10 **Conditional clearances**
11 **Holding instructions**

(Refer AIP GEN 3.4-12 (4.4).)

TURN YOUR TRANSPONDER ON

Transponders provide an essential defence against violations of controlled airspace and mid-air collisions.

As well as helping air traffic controllers to prevent potential conflicts, transponders are detected by aircraft fitted with Traffic alert and Collision Avoidance Systems (TCAS), allowing them to "see" other aircraft and take evasive action if necessary.

But TCAS will not work if your transponder is unserviceable, switched off, or not transmitting altitude information (ALT).

So, if you have a transponder:

- Select code 1200.
- Switch it to ON/ALT (Mode C) when lining up for take-off.
- Leave it switched to ON/ALT until after landing.

(For more information see AIP ENR 1.6 - 7 and 8.)

MELBOURNE COASTAL ROUTE

The coastal route joins Carrum (6.5NM south of Moorabbin) and Laverton (about 4NM north of Point Cook), and is used to skirt the Melbourne Control Zone, south of the city. Aircraft using the route must remain outside controlled airspace. Weather permitting, operations should be conducted at the recomended altitudes (East and southbound, 1,500ft; north and westbound, 2,500ft.).

ENTERING COASTAL ROUTE

- Take care when entering the coastal route due to the large number of VFR aircraft that use the route. Maintain a good look-out for other aircraft, particularly when climbing and descending.
- Use current QNH.
- Listen out on Melbourne Radar frequency (135.7). If you have a transponder squawk 1200 with ALT.
- Strobes, landing and taxi lights should be on.
- Make a radio call. For example, *"Melbourne Coastal Traffic, C172 ZFR, abeam Carrum, northbound at 2500. Melbourne Coastal"* If you receive a reply, organise separation with other aircraft. During tower hours contact Moorabbin tower when within 6NM of Moorabbin
- Keep to the right (oncoming traffic should be on your left).
- When terrain, weather and CTA steps permit, fly at VFR cruising altitudes.
- If you operate within 6NM of Moorabbin when the tower is active, contact the Tower on 123.0.

Caution:

- **Lower limit of Class C airspace (CTA) varies over the course of the route. Use the Melbourne VTC to identify airspace steps.**
- **Beach patrol aircraft operate below 1,000ft during the summer.**
- **Do not overfly oil refineries, storage tanks or prisons.**

LEAVING COASTAL ROUTE

- Take care when leaving the coastal route due to the large number of VFR aircraft that use the route. Maintain a good look-out for other aircraft, particularly when climbing and descending.

Caution:

- **Lower limit of Class C airspace (CTA) varies over the course of the Coastal Route. Use the Melbourne VTC to identify airspace steps.**
- **Familiarise yourself with the lateral and vertical limits of CTA, CTR and CTAFs. Always plan, and fly with, a current Melbourne VTC.**

Radio frequency: Melbourne Radar 135.7

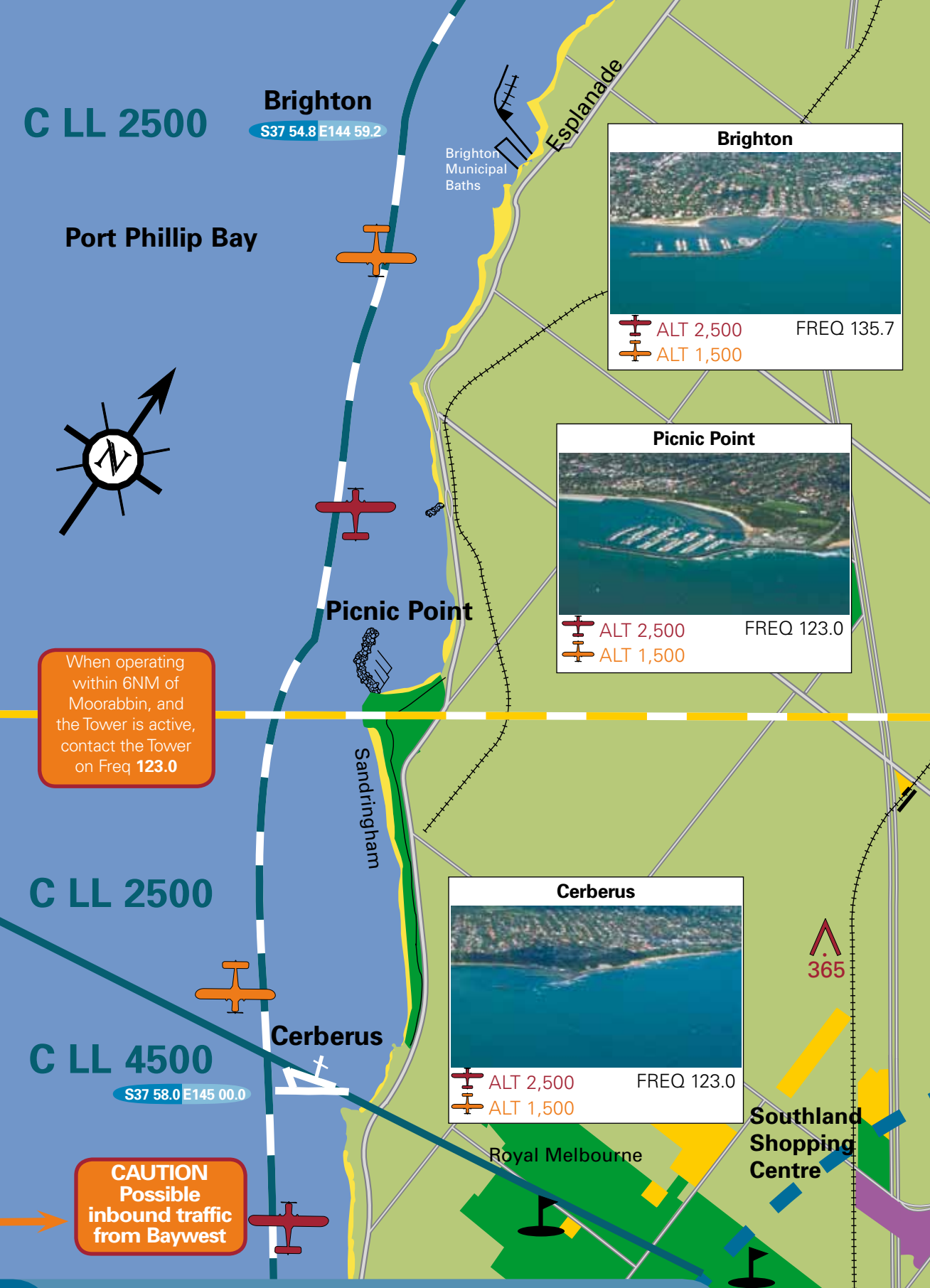
SAFETY TIPS

1. **Read all details in ERSA and the Melbourne VTC before transiting the inland route.**
2. **Check weather forecast and NOTAM before flight.**
3. **Check the requirements for the carriage of life jackets.**
4. **Plan your actions in the event of a forced landing and consult your Pilot's Operating Handbook for safe ditching technique.**
5. **Maintain a continuous lookout for other aircraft.**


CAUTION
Possible
inbound traffic
from Baywest
Royal Melbourne
Ricketts Point
ALT 2,500
ALT 1,500
FREQ 123.0
Knobb
Pt
Ricketts
Pt
Port Phillip
Bay
MOORABBIN GAAP CTR
Tower 118.1 (east)
Tower 123.0 (west)
NDB 398
ATIS/AWIS 120.9
Location S37 58.6 E145 06.1
CTAF[R]#AH 118.1
GAAP CTR
0-2500ft
C LL 4500
MB 3NM
Mentone Beach
Mordialloc Pier
Mordialloc Pier
ALT 2,500
ALT 1,500
FREQ 123.0
Woodlands
Boundary Rd
Nepean Highway
CAUTION
Possible
inbound traffic
from Shoal


Port Phillip Bay
C LL 4500
Carrum
S38 05.4 E145 07.0
When operating within 6NM of Moorabbin, and the Tower is active, contact the Tower on Freq 123.0
Nepean Highway
Memorial Oval
Chelsea
Edithvale Wetlands
Edithvale Wetlands
Mornington Peninsula Freeway
D314
4500
0
Patterson River
250
Melbourne Water Eastern Treatment Plant
Patterson Lakes
Carrum
ALT 2500 ft
FREQ 135.7
"Melbourne Coastal Route Traffic, Cessna 172 ZFR, Carrum Northbound, 2500 Melbourne Coastal Route."
(Cloud permitting.)
If you receive a reply arrange separation between aircraft..
Aircraft flying from Carrum to Laverton should maintain 2,500ft on area QNH, cloud permitting.


Yarra River
The Australian National Line
Garden City
Williamstown Rd
C LL 1500
Princes Pier
Station Pier
Albert Park Lake
ALT 2,500
ALT 1,500
FREQ 135.7
Station Pier
S37 50.9 E144 55.8
Transfield Shipbuilding
S37 52.2 E144 54.7
Williamstown
C LL 2500
Beaconsfield Pde
Kerferd Rd Beach
Albert Park Lake
S37 51.3 E144 58.5
St Kilda Pier
ALT 2,500
ALT 1,500
FREQ 135.7
St Kilda Pier
St Kilda Marina
Port Phillip Bay
C LL 2500
Point Ormond
S37 53.0 E144 59.0
Esplanade
Nepean Hwy


C LL 2500
Brighton
S37 54.8 E144 59.2
Port Phillip Bay
Brighton Municipal Baths
Esplanade
Brighton
ALT 2,500
ALT 1,500
FREQ 135.7
Picnic Point
ALT 2,500
ALT 1,500
FREQ 123.0
Picnic Point
When operating within 6NM of Moorabbin, and the Tower is active, contact the Tower on Freq 123.0
Sandringham
C LL 2500
Cerberus
Cerberus
ALT 2,500
ALT 1,500
FREQ 123.0
365
C LL 4500
S37 58.0 E145 00.0
Royal Melbourne
Southland Shopping Centre
CAUTION
Possible inbound traffic from Baywest

Aircraft flying from Laverton to Carrum should maintain 1,500ft on area QNH, cloud permitting.

K-Mart Warehouse

D366
CTA LL
SFC
Point Cook CTAF[R]

Laverton
S37 52.0 E144 45.0

Refinery

Laverton (Kmart Warehouse)

ALT 1,500ft **FREQ 135.7**

"Melbourne Coastal Route Traffic, Cessna 172 ZFR, Laverton Eastbound, 1500 Melbourne Coastal Route"

If you receive a reply arrange separation between aircraft.

Princes Fwy

Reserve

R321
2900 ft
SFC
H24

C LL 1500

C LL 2500

Queens St

Tip

Reserve

11 DME ML

Princes Fwy

Altona South

ALT 2,500
ALT 1,500
FREQ 135.7

Tree Plantation

Koroit Creek Rd

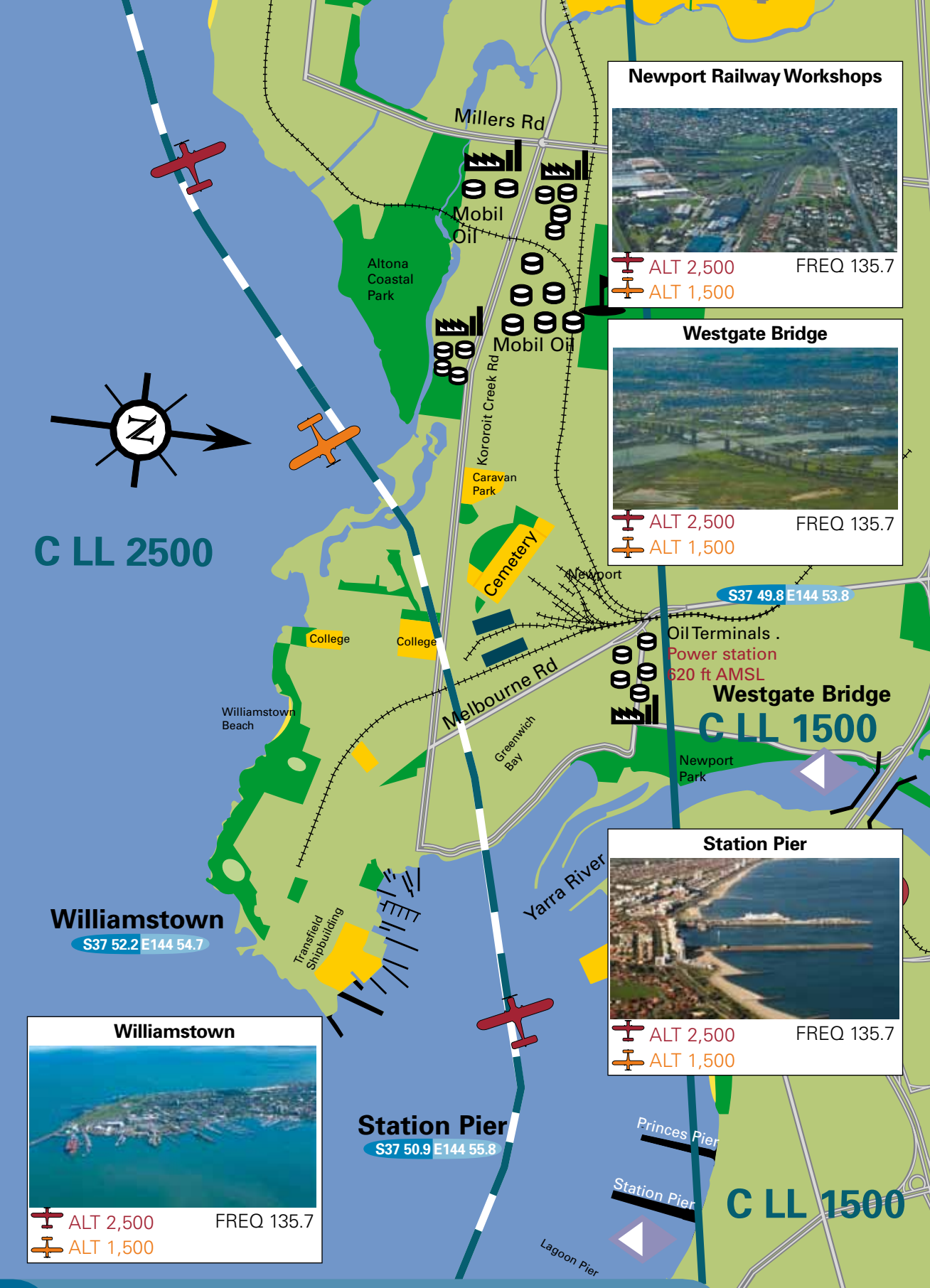
Altona South
S37 52.0 E144 51.0

Toyota Engine Plant

Reserve

Cherry Lake

BP Oil


Newport Railway Workshops
ALT 2,500
ALT 1,500
FREQ 135.7
Westgate Bridge
ALT 2,500
ALT 1,500
FREQ 135.7
Millers Rd
Mobil Oil
Altona Coastal Park
Mobil Oil
Kororoit Creek Rd
Caravan Park
Cemetery
Newport
S37 49.8 E144 53.8
Oil Terminals .
Power station
620 ft AMSL
Westgate Bridge
C LL 1500
Newport Park
C LL 2500
College
College
Melbourne Rd
Williamstown Beach
Greenwich Bay
Yarra River
Station Pier
ALT 2,500
ALT 1,500
FREQ 135.7
Williamstown
S37 52.2 E144 54.7
Transfield Shipbuilding
Williamstown
ALT 2,500
ALT 1,500
FREQ 135.7
Station Pier
S37 50.9 E144 55.8
Princes Pier
Station Pier
C LL 1500
Lagoon Pier

Where are you now?

If in doubt, call Melbourne

Radar on 135.7

Each year in Australia hundreds of aircraft inadvertently stray into controlled airspace. For each incident the risk of a mid-air collision rises.

Many of these incidents could have been avoided if the pilots involved had contacted air traffic control when they first became unsure of their position.

If you become unsure of your position and you are within 30 DME of Melbourne, or 40 DME to the South and South East (see VTC for boundaries) contact Melbourne Radar on 135.7. (Beyond those distances contact Melbourne Centre – check your VTC for frequencies).

Air traffic control can help you with position information and navigation guidance. All you have to do is ask.

MELBOURNE VFR INLAND ROUTE

The inland route runs between Sugarloaf Reservoir and Kilmore and is widely used by northbound and southbound VFR traffic. Aircraft using the route must remain outside controlled airspace.

ENTERING INLAND ROUTE

- Take care when entering the inland route due to the large number of VFR aircraft that use the route. Maintain a good lookout for other aircraft, particularly when climbing and descending.
- Use current QNH.
- Listen out on Melbourne Radar frequency (135.7). If you have a transponder squawk 1200 with ALT.
- Strobes, landing and taxi lights should be on.
- Make a Traffic call, for example, *"Melbourne Inland Route Traffic, C172 ZFR, abeam Sugarloaf, northbound at 2500 Melbourne Inland Route."* If you receive a reply, organise separation with other aircraft.
- Keep to the right (oncoming traffic should be on your left).
- Kilmore Gap weather is available on AWIS 128.6 Forecast also available on Area 30.
- When terrain, weather and CTA steps permit, fly at VFR cruising altitudes.

Caution:

- **High ground in close proximity to the route.**
- **Lower limit of Class C airspace (CTA) varies from 2,500ft to 4,500ft over the course of the route. Use the Melbourne VTC to identify airspace steps.**
- **Be aware of CTAF in your area. Make a "Traffic" call on the CTAF frequency if you intend to enter the CTAF.**
- **Mechanical turbulence in high winds can make accurate altitude holding difficult.**

LEAVING INLAND ROUTE

- Take care when leaving the inland route due to the large number of VFR aircraft that use the route. Maintain a good look-out for other aircraft, particularly when climbing and descending.

Caution:

- **Lower limit of Class C airspace (CTA) varies from 2,500ft to 4,500ft over the course of the Inland Route. Use the Melbourne VTC to identify airspace steps.**

Radio frequency: Melbourne Radar 135.7

SAFETY TIPS

1. **Read all details in ERSA and the Melbourne VTC before transiting the inland route.**
2. **Check weather forecast and NOTAM before flight.**
3. **The inland route is an area of high ground and is often covered by cloud. Make sure you have an option to turn back if the weather deteriorates.**
4. **Plan your actions in the event of a forced landing.**
5. **Maintain a continuous lookout for other aircraft.**

Kilmore

ALT 3,500ft **FREQ 135.7**

"Melbourne Inland Route Traffic, Cessna 172 ZFR. Kilmore tracking to Sugarloaf, 3500 Melbourne Inland Route."

If you receive a reply, arrange separation between aircraft.

Northern Hwy

C LL 4500

CAUTION
High ground, dense vegetation.

Kilmore

S37 18.0 E144 57.3

North Eastern Railway

Kilmore – Darraweit Rd

Dismantled Railway line

TR 133°M

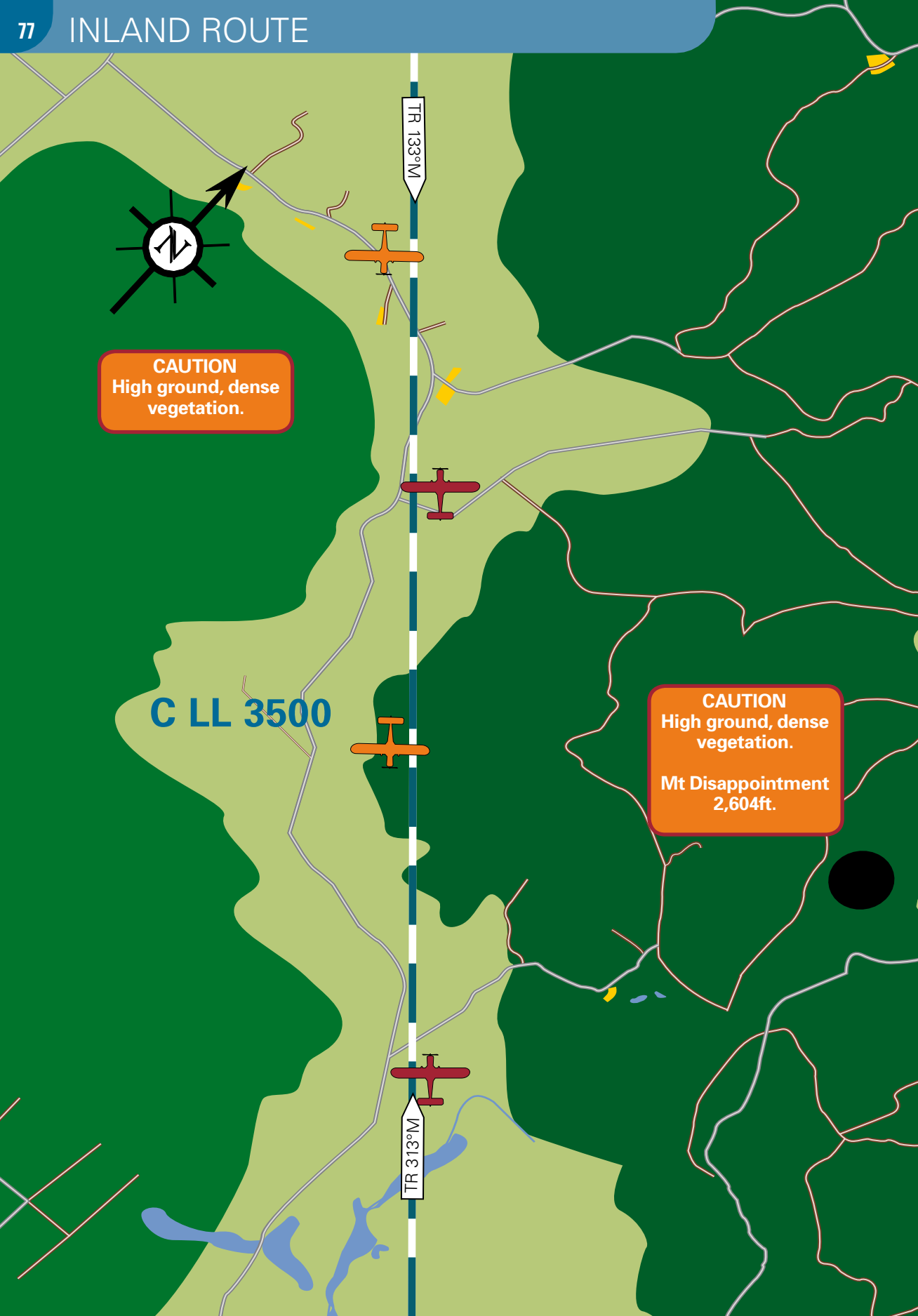
Northern Hwy

CAUTION
High ground, dense vegetation.

Plantation Forest

TR 313°M


Plantation Forest
TR 133°M
Hume Freeway
Wandong Heathcote Junction
ALT VFR level
cloud permitting
FREQ 135.7
Wandong
C LL 4500
C LL 3500
Heathcote Junction
Hume Freeway
North Eastern Railway
CAUTION
High ground, dense vegetation.
Walla CTAF
126.7
TR 313°M


TR 133°M
CAUTION
High ground, dense vegetation.
C LL 3500
CAUTION
High ground, dense vegetation.
Mt Disappointment 2,604ft.
TR 313°M

TR 133°M

Toorourang Reservoir

Whittlesea

Whittlesea

ALT VFR levels
Cloud permitting

FREQ 135.7

C LL 3500

Yan Yean

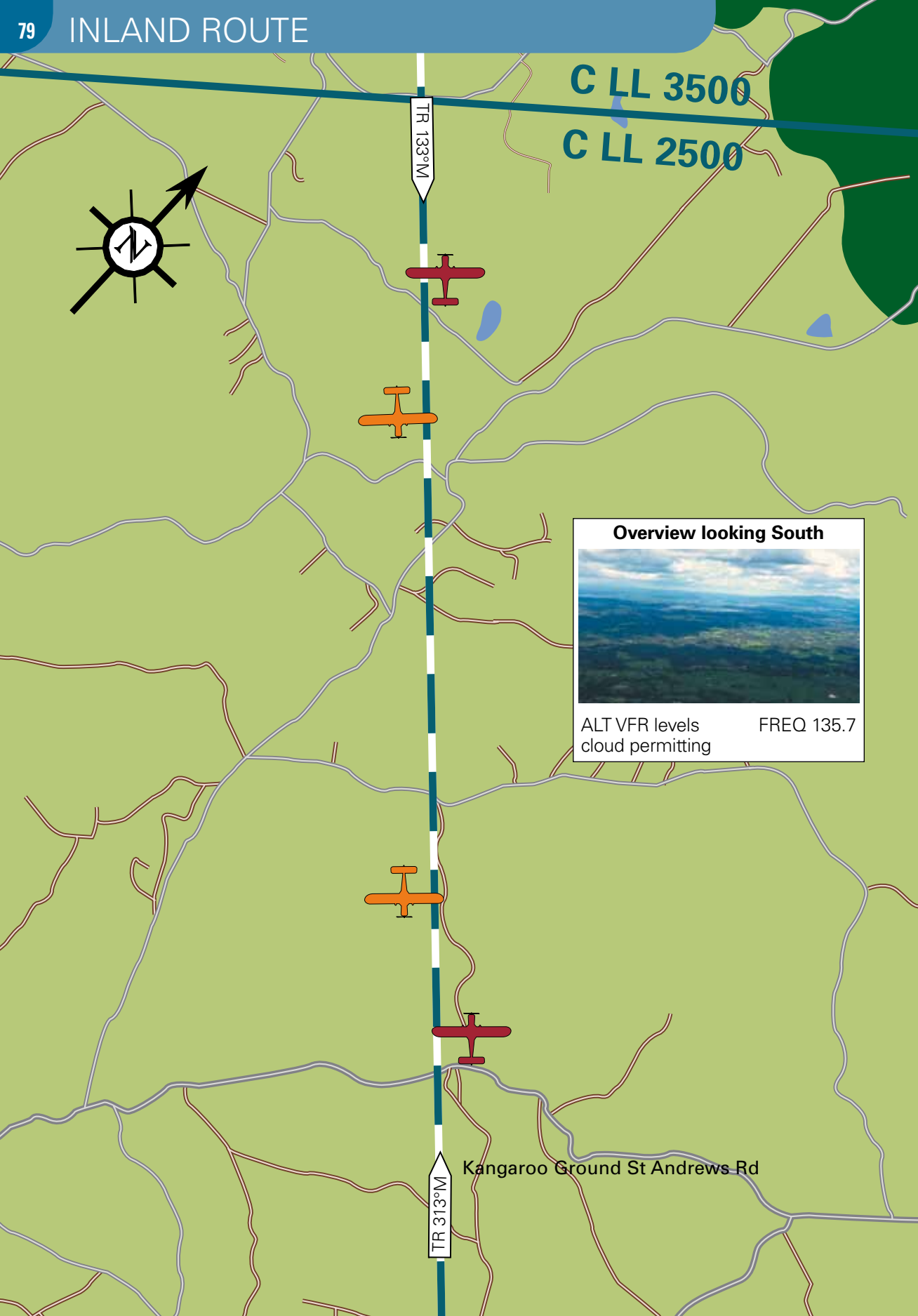
ALT VFR levels
cloud permitting

FREQ 135.7

CAUTION
High ground, dense vegetation.

TR 313°M

Yan Yean Reservoir


C LL 3500
C LL 2500
TR 133°M
TR 313°M
Kangaroo Ground St Andrews Rd
Overview looking South
ALT VFR levels
cloud permitting
FREQ 135.7

Sugarloaf Reservoir

ALT 2,500ft **FREQ 135.7**

"Melbourne Inland Route Traffic, Cessna 172 ZFR, Sugarloaf, Tracking to Kilmore, 2500 Melbourne Inland Route"

If you receive a reply arrange separation between aircraft.

DID YOU KNOW...

that a Radar Information Service (RIS) or an ATC Flight Following service for VFR aircraft is available in class E and G airspace. Services available are:

- navigation assistance
- position information
- traffic information
- SAR alerting

You must be in direct contact with ATC, transponder-equipped and squawking. See AIP GEN 3.3–14 (2.16) for procedures.

do your PART

to avoid violations of controlled airspace:

P **POSITION:** know and follow the position of your aircraft

A **ALTITUDE:** set QNH or Area QNH as controlled jet traffic might be only 500 feet above

R **RADIO:** actively monitor the VHF frequency shown in the biscuit on your chart

T **TRANSPONDER:** ensure on and squawking 1200 and altitude

THE 5 BIGGEST FACTORS CONTRIBUTING TO A VCA ARE:

1. **Pilot inattention**
2. **Pilot distraction**
3. **High workload in cockpit**
4. **Weather conditions**
5. **Misreading your VTC**

Organise your workload wisely and prioritise your tasks.

FREQUENCIES

Moorabbin Tower	**118.1**	**123.0**
Moorabbin Ground	119.9	
ATIS (MB)	120.9	398
Moorabbin CTAF[R]	118.1	
AWIS	03 9580 9637	
Essendon Tower	**125.1**	
Essendon Ground (SMC)	121.9	
ATIS (EN)	119.8	356
AWIS	133.2	
Melbourne Approach	**132.0**	
Melbourne Departures	118.9N	129.4S
Coastal & Inland Route		
Melbourne Radar	135.7	

PHONE NUMBERS

Flightwatch	1800 814 931
Moorabbin Tower	03 9586 6180
Essendon Tower	03 9374 1678

Contact tower only in emergencies.

NAVIGATION AIDS

Moorabbin NDB	398
Essendon NDB	356
Melbourne VOR	114.1

Check current version of guide on:
www.casa.gov.au
Phone: 131 757 Safety Promotion

RADIO FAILURE

Squawk 7600. Stay in VMC and broadcast Intentions. Precede all radio calls with: *"Transmitting Blind".*

If possible, avoid Class C and GAAP airspace and land at a CTAF.

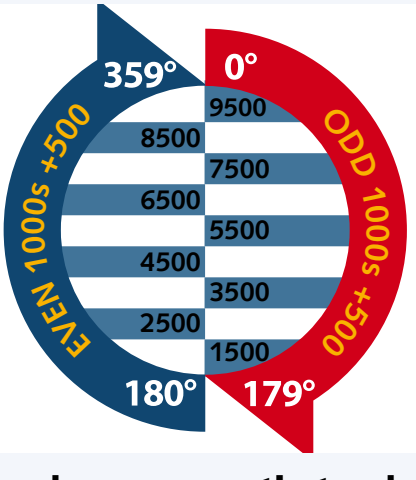
CTAF: When joining the circuit stay at least 500ft above circuit height. When you have selected the runway descend on the dead side of the circuit. Cross the upwind threshold at circuit height. Fly a normal circuit. Check AIP ENR 1.1-76 (57 and 64) for circuit entry requirements at an aerodrome in Class G airspace and ERSA EMERG 1 for general emergency procedures.

Moorabbin: Carry out general COM failure procedures. Track via a GAAP Approach Point. Enter the CTR at 1,500 feet AMSL and maintain that altitude until overhead the aerodrome.

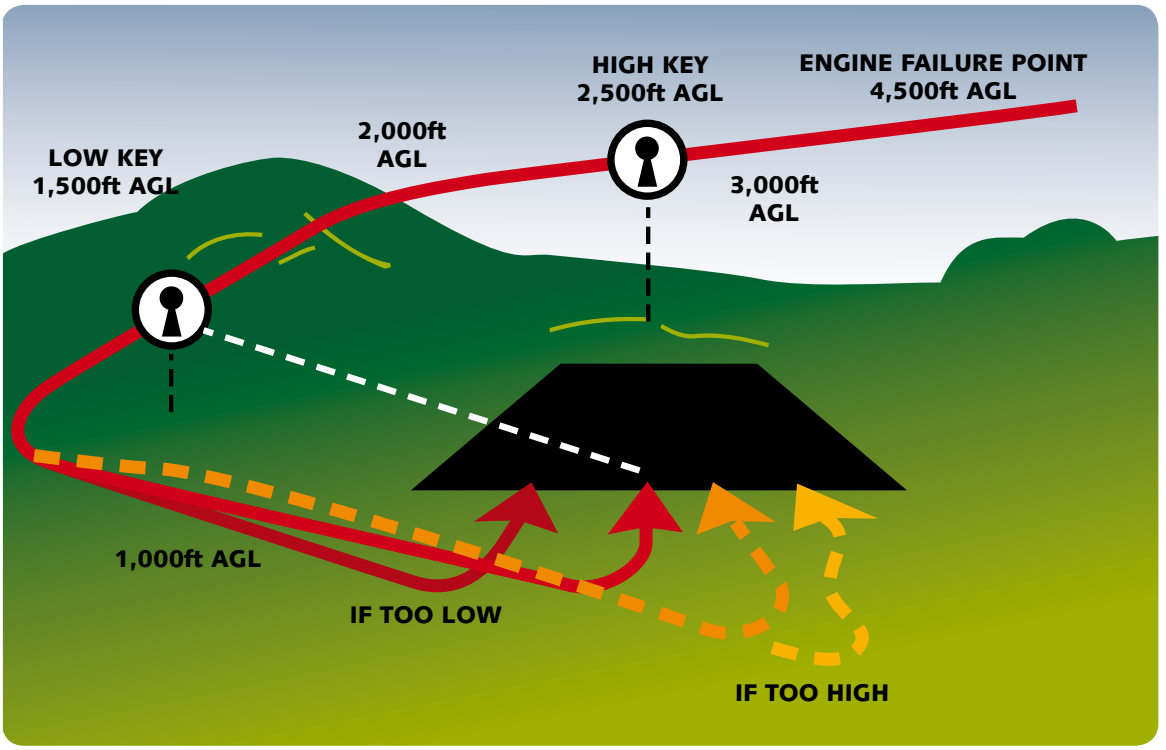
Ascertain the landing direction, descend to 1,000 feet AMSL and join the western circuit on crosswind (remain clear of the eastern circuit). Proceed with a normal circuit and landing.

Maintain separation from other aircraft and watch for light signals from the tower (see back cover of this guide). Mobile phones can be used in emergencies.

VFR CRUISING ALTITUDES



Based on magnetic track



INITIAL CHECK

Hold altitude	Aim for best glide speed
Mixture	Rich
Carburettor heat	Full hot
Fuel On **Pump** On	**Change tanks**
Trim	To best glide speed

FIELD SELECTION

Wind: determine direction
Surroundings. Power lines, trees.
Size & Shape: in relation to wind
Surface and Slope
S(c)ivilisation: close proximity if possible

FMOST CHECK

Fuel	Contents, pump On, primer locked
Mixture	Up & down range, leave rich
Oil	Temps & pressures green range
Mag switches	Left then right back to both
Throttle	Up & down range then close

MAYDAY CALL & SQUAWK 7700

"Mayday Mayday Mayday, Melbourne Piper, ZFR, Engine Failure, 3NM west of Carrum, 2,500 feet, attempting to land on beach."

Any other useful information such as number of persons on board (POB), dangerous cargo, fuel remaining etc (if time permits).

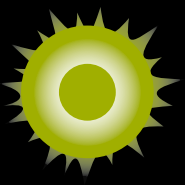
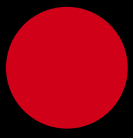
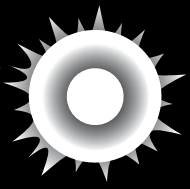
BRIEF YOUR PASSENGERS

FINAL ACTIONS

Fuel	Off
Mixture	Lean cut-off
Mags	Off
Harness	Tight
Door	As required
Master switch	Off

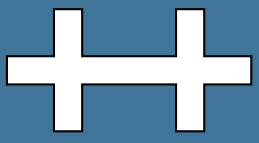
Caution If flaps are electrically operated set flaps before turning off master switch.

LIGHT SIGNALS

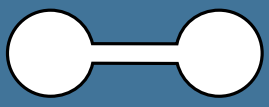
ON GROUND		IN FLIGHT
Authorised to **TAKE-OFF** if pilot is satisfied that no collision risk exists		Authorised to **LAND** if pilot is satisfied that no collision risk exists
Authorised to **TAXI** if pilot is satisfied that no collision risk exists		**RETURN** for landing
STOP		**GIVE WAY** to other aircraft **CONTINUE CIRCLING**
TAXI CLEAR OF LANDING AREA in use		**DO NOT LAND** Aerodrome unsafe
Return to starting point on aerodrome		

SYMBOLS NEAR WIND DIRECTION INDICATOR

AERODROME UNSERVICEABLE



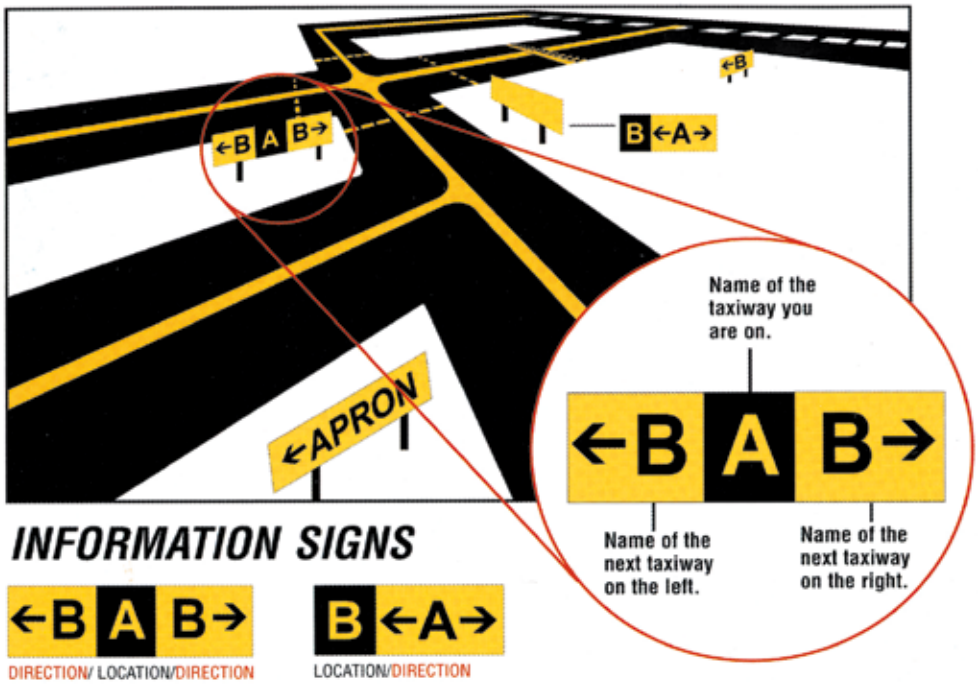
GLIDING OPERATIONS IN PROGRESS



OPERATIONS ARE CONFINED TO HARD SURFACE RUNWAYS, APRONS AND TAXIWAYS ONLY

Australian Government
Civil Aviation Safety Authority

Airport signs and markings



INFORMATION SIGNS

DIRECTION/ LOCATION/DIRECTION

LOCATION/DIRECTION

DIRECTION/ LOCATION/DIRECTION/DIRECTION

DESTINATION

RUNWAY HOLDING POINTS (OR TAXI-HOLDING POSITION MARKINGS)

The following markings identify locations beyond which you cannot proceed without a clearance.


New taxi holding position.


Old taxi holding position.


Holding position when Cat I, II or III precision approaches are being used.
*Only applicable when notified by ATC OR ATIS.



At night, taxi holding position is indicated by three yellow lights (or two when taxiway sidelighting is provided) showing in the direction of the approach to the runway.

WARNING: This educational document does not replace ERSA, AIP, regulatory documents or NOTAMS. For more information about airport signs and marking see AIP - Aerodromes.

CIVIL AVIATION SAFETY AUTHORITY 2009