

# Aerotowing of Gliders

Bacchus Marsh Aerodrome (YBSS)

**The Gliding Federation of Australia Inc**

(ABN 82 433 264 489)

Aerotowing Manual

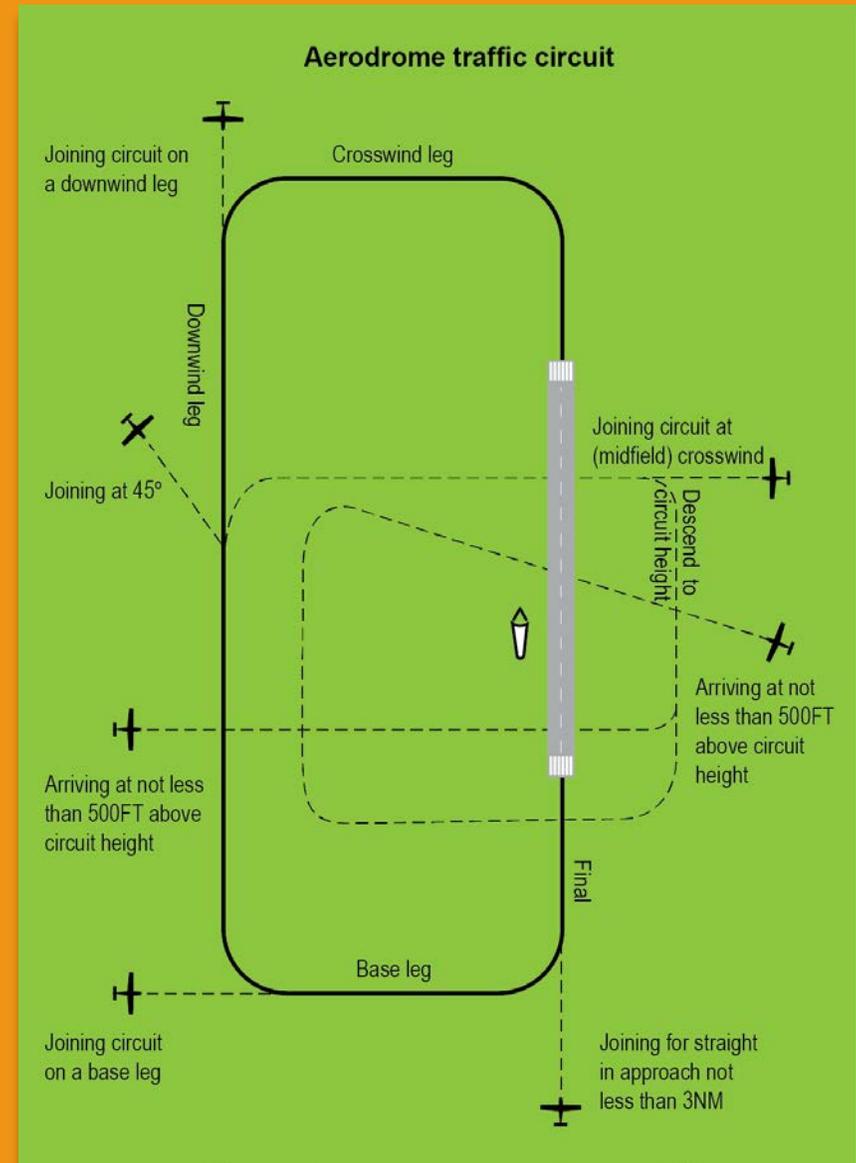


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Click on the above picture to download a copy of the Aerotowing Manual

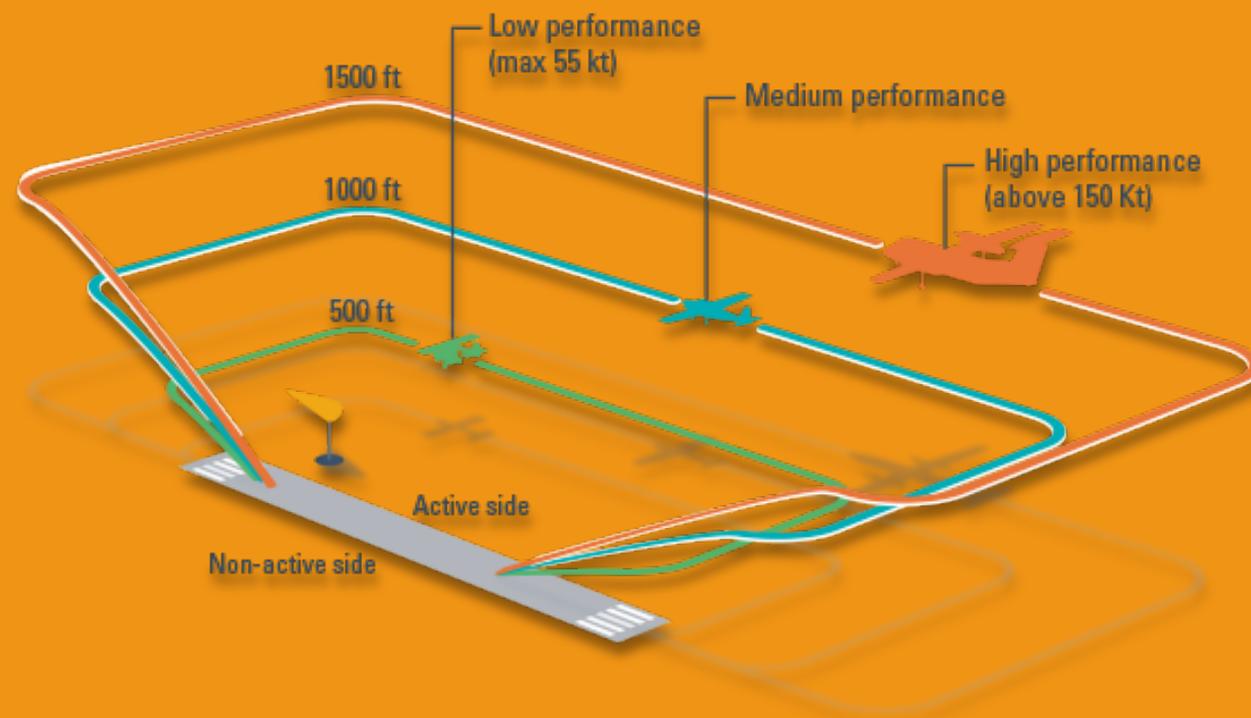
# Operations in the vicinity of non-towered aerodromes

- The standard traffic circuit procedures are described in Civil Aviation Advisory Publication (CAAP) 166-1 'Operations in the vicinity of non-controlled aerodromes.'



## Operations in the vicinity of non-towered aerodromes

- By convention, aircraft should fly the standard traffic circuit at the heights above aerodrome elevation as in the diagram opposite:



# Glider Towing Patterns



Tow pilots are required to adopt a towing pattern which minimises towing into the sun, takes advantage of forced landing options, stays within gliding range of the airfield, and makes maximum use of any lift which is available.



This judgment is most affected by the wind strength causing a greater reduction in groundspeed when flying into wind, and by exposure to sinking air and drag in turbulence.



The towing pattern will be dictated by the wind velocity and likely release position, and **the need to avoid conflict with other traffic in the circuit area** (Refer GFA Aerotowing Manual, Section 8.3 - Climb).

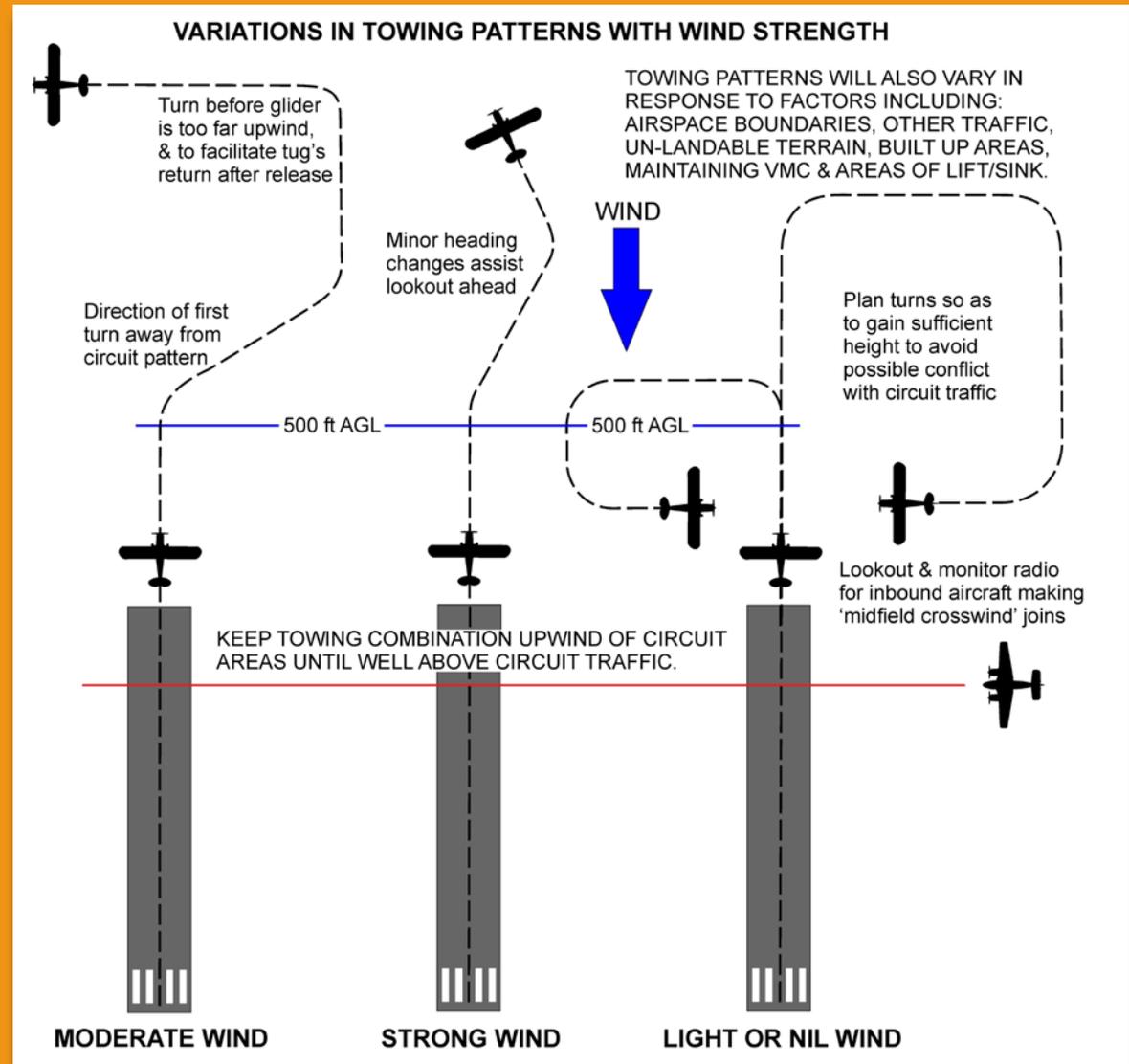
# Guidance on Towing Patterns

Section 10.1.22 of the GFA/CASA Aerotowing Manual describes suggested towing patterns and provides a graphical representation together with some words of guidance.

This guidance needs to be considered in conjunction with the tow pilot competencies at Section 8 of the manual to gain a more complete understanding of the responsibilities of the tow pilot during the launch.

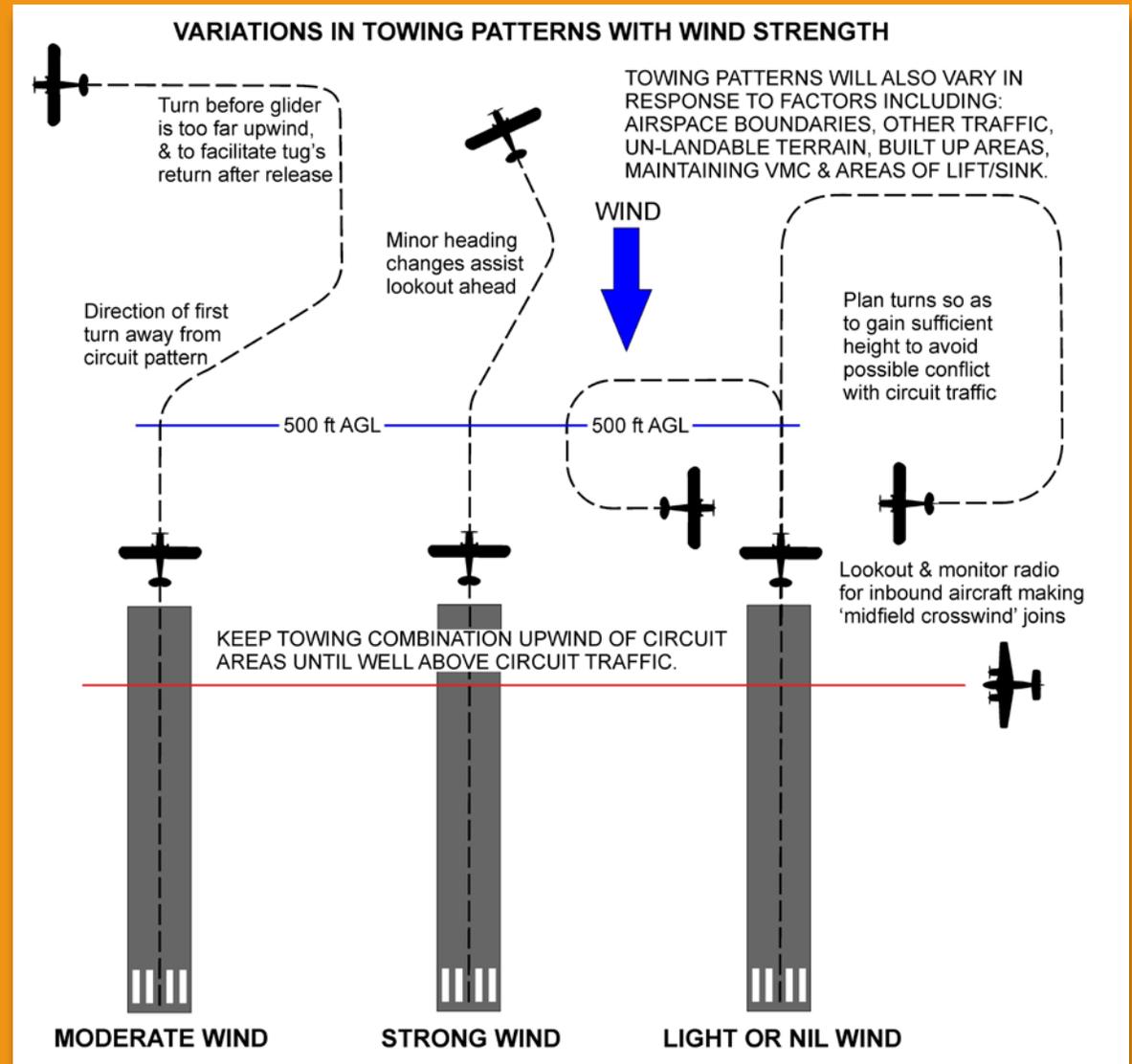
# Guidance on Towing Patterns

- This diagram illustrates suggested towing patterns that tow pilots could fly, unless specific site requirements dictate otherwise.
- The towing patterns depicted are designed to keep the combination away from circuit entry points and the downwind leg of the circuit.



# Guidance on Towing Patterns

- This guidance is consistent with Civil Aviation Regulation 166A(2)(c), which states: *"if the pilot is flying in the vicinity of the aerodrome, the pilot must: (i) join the circuit pattern for the aerodrome; or (ii) avoid the circuit pattern for the aerodrome"*.



# Guidance on Towing Patterns



The towing patterns suggested in Section 10.1.22 are a few of many possible variations, and the ones depicted can be varied at the tow pilot's discretion.



At all times the tow pilot must keep a sharp lookout, continually clear the aircraft's blind spots, and where possible, avoid those parts of the sky in which you know traffic will congregate, e.g. circuit joining areas.



Tow pilots should, wherever possible, avoid climbing the combination in the downwind leg of the circuit and plan their departure to keep the glider within gliding distance of the airfield.



While it is usual for an aircraft to maintain runway heading until it reaches 500' AGL, the pilot in command of a glider combination is permitted to make deviations to maximise safety for the combination during the take-off.

# Tow pilots will aim to:



Keep the combination clear  
of circuit joining areas;



avoid climbing the combination in  
the downwind leg of the circuit;  
and



keep the glider within gliding  
distance of the airfield.

# Regulatory Exemptions for Tow Pilots

GFA Tow Pilots are exempt from the following Regulation:

- REG 166A (2)(d) of CAR: *“if the pilot joins the circuit pattern for the aerodrome for a landing at the aerodrome, the pilot must, after joining the circuit pattern, make all turns in accordance with subregulation (3)”*.
- For operations at YBSS, this means tow pilots are exempt from the requirement to make all turns in the circuit to the left.
- This does not mean that tow pilots can conduct contra circuits.

# Regulatory Exemptions for Tow Pilots

GFA Tow Pilots are exempt from the following Regulation:

- REG 166A (2)(e) of CAR: *“if the pilot takes off from the aerodrome, the pilot must, after taking off, make all turns in accordance with subregulation (3) while the aircraft is flying in the circuit pattern for the aerodrome”*.
- This means tow pilots are exempt from the requirement to make all turns to the left.
- Tow pilots may turn right, or climb straight out, or any other variation to achieve reduced collision risk and safe climb paths.

# Regulatory Exemptions for Tow Pilots

GFA Tow Pilots are exempt from the following Regulation:

- REG 166A (2)(f) of CAR: *“subject to subregulation (4), if the pilot takes off from the aerodrome, the pilot must maintain the same track from the take-off until the aircraft is 500 feet above the terrain.”*
- The instrument of exemption clarifies this exemption at paragraph 7(2) as follows: *“the pilot may only change the track of the tow aircraft while the aircraft is less than 500 feet above the terrain to the extent necessary to keep the tow aircraft and glider in tow within gliding distance of terrain that is suitable for landing”.*
- The most suitable terrain is the aerodrome runway.