



## **SSSAF AIRSPACE MANAGEMENT SAFETY OFFICER TRAINING MANUAL**

### **1. AIM:**

The aim of this document/manual is to provide a basic understanding of the role and responsibilities for the safety officer, within the airspace surrounding SSSFA's Garrawarra field, and the communication skills necessary to provide aircraft avoidance manoeuvre instructions.

### **2. MOTIVATION:**

To ensure SSSFA's compliance with CASA's approval for flight operations up to 1000FT above ground (AGL) and within 500 metres radius for our Garrawarra Flying Field, all whilst maintaining the required safety as set out in the CASA Approval App.0145.

### **3. REFERENCE MATERIAL:**

This manual, SSSFA Risk Assessment and Instrument Number: CASA.AreaApp.0145 (attached).

### **4. ROLE OF THE SAFETY OFFICER:**

Is to provide a visual lookout (Observer) for manned aircraft during Model aircraft operations above 400FT AGL. Should information come to hand that a manned aircraft is transiting the area or operating within vicinity of the site, the SAFETY Officer (Observer) must take action and provide directions to operators of all Model aircraft to avoid any conflict. All model aircraft operators must ensure that they adhere to any safety-related direction given.

### **5. SAFETY OFFICER ELIGIBILITY FOR APPOINTMENT:**

- a. Must be a current financial member of SSSFA or an MAAA affiliate club and be the holder of at least a Bronze Wings qualification.
- b. To ensure a minimum eyesight standard, must hold a current motor vehicle driver's licence.
- c. Must have an average community standard of speaking and understanding the English language, with sufficient hearing ability to comprehend conversation at normal speech volume.

- d. A review of all the above for each appointed Safety Officer/ Observer, shall be conducted on an annual basis by the current CASA nominated responsible person.
- e. The *nominated responsible person* for the club as per Instrument Number: CASA.Area.App.0145, may remove a dedicated person to act in the role as safety officer if they fail to perform the required duties or have become unable to do so.

## 6. GENERAL RULES FOR FLYING ABOVE 400FT AND BELOW 1,000FT AGL:

If there is any chance that the performance and flight characteristics of the model you are flying or the type of flying you are conducting, is likely to result in the model going above 400FT AGL, there must be an appointed safety officer (observer) in attendance and specifically assigned to the role.

The appointed safety officer (observer) must be solely focused on the task and not engaged in any other activity. Should the appointed person's attention become diverted to another task, the assignment of the safety officer role must be passed to another authorised person.

### In Summary:

- The CASA instrument approval for operation up to 1000FT above AGL, is only permitted at SSSAF's Garrawarra field located at Princess Highway, Woronora Dam, New South Wales, co-ordinates **S34 09.5 E150 58.0**
- An appointed dedicated safety officer must be on the field for any flight above 400' AGL, and if two people are at the field, only one can fly at a time. If six are on the field, only five can fly.
- Outside an organised event with a Safety Officer, a maximum of six models to be above 400ft at any one time.
- If manned aircraft are in the area, seek guidance from the Safety Officer to facilitate a potential avoidance plan. Manned aircraft (General Aviation (GA) always have right of way.
- No flying over 1000ft AGL at any time and for any reason.
- No flying outside a 500 Metre horizontal radius from centre of the field.

## 7. GARRAWARRA FIELD LOCATION AND AIRSPACE

The existence and location of the field is published for light aircraft pilots on the Sydney Visual Terminal Chart (VTC). The symbol for model aeroplane operations is a magenta hang glider with an M.

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MODEL AIRCRAFT .....  
(Symbol usually only shown  
if operating above 400FT AGL)



The chart does not provide pilots with information as to the maximum height that models may operate. It is also a little vague as to the exact location of the field, which can be seen in the copy of the chart below.

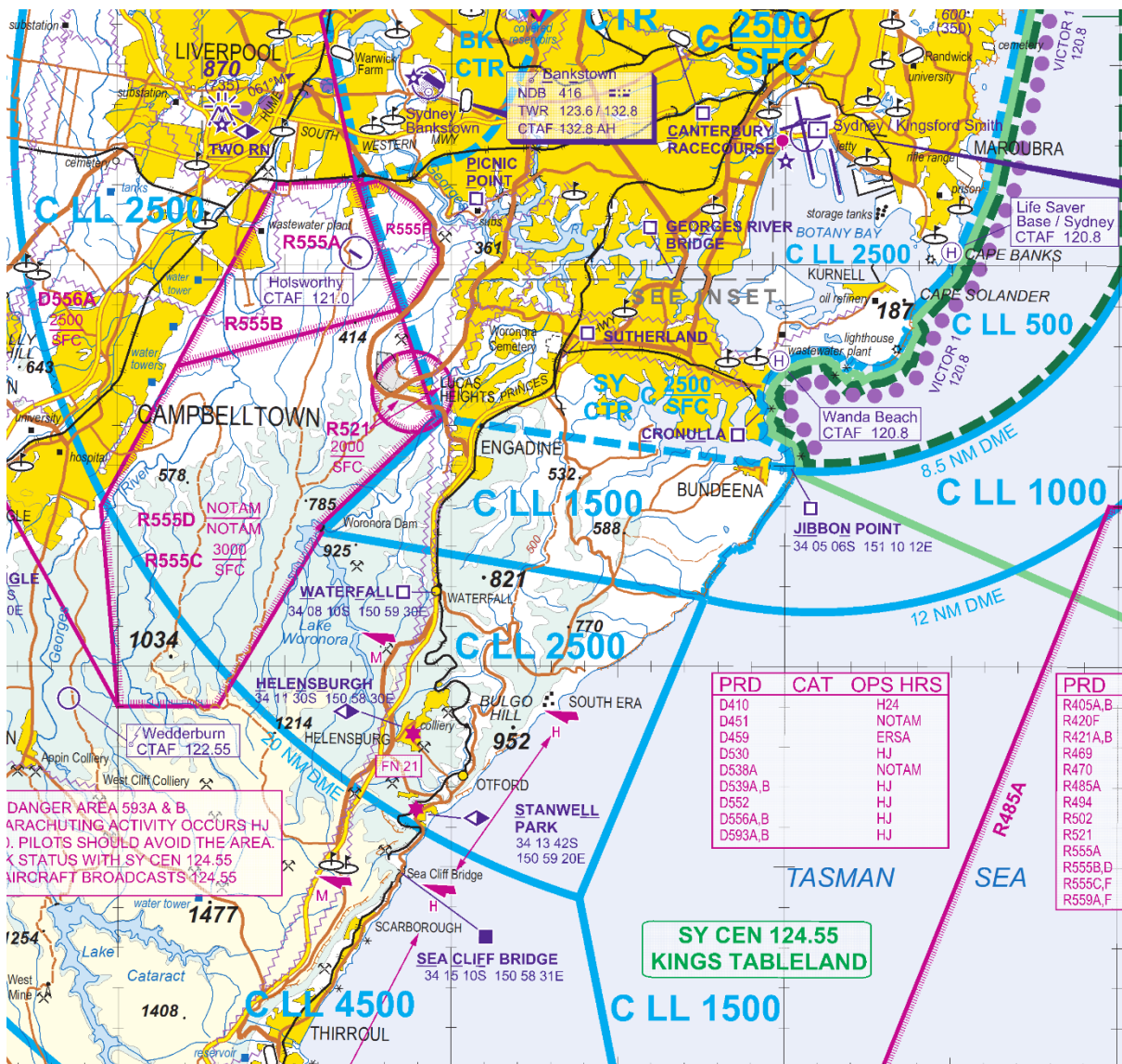
The Garrawarra field height approval area resides in Class "G" Class Airspace, directly below the Class "C" airspace associated with Sydney aerodrome. The field has an elevation of approximately 1000' above sea level (AMSL), and the CASA approval for

models to fly up to 1000' AGL provides a 500' safety buffer to the Lower Level of 2500' AMSL for the C Class airspace above.

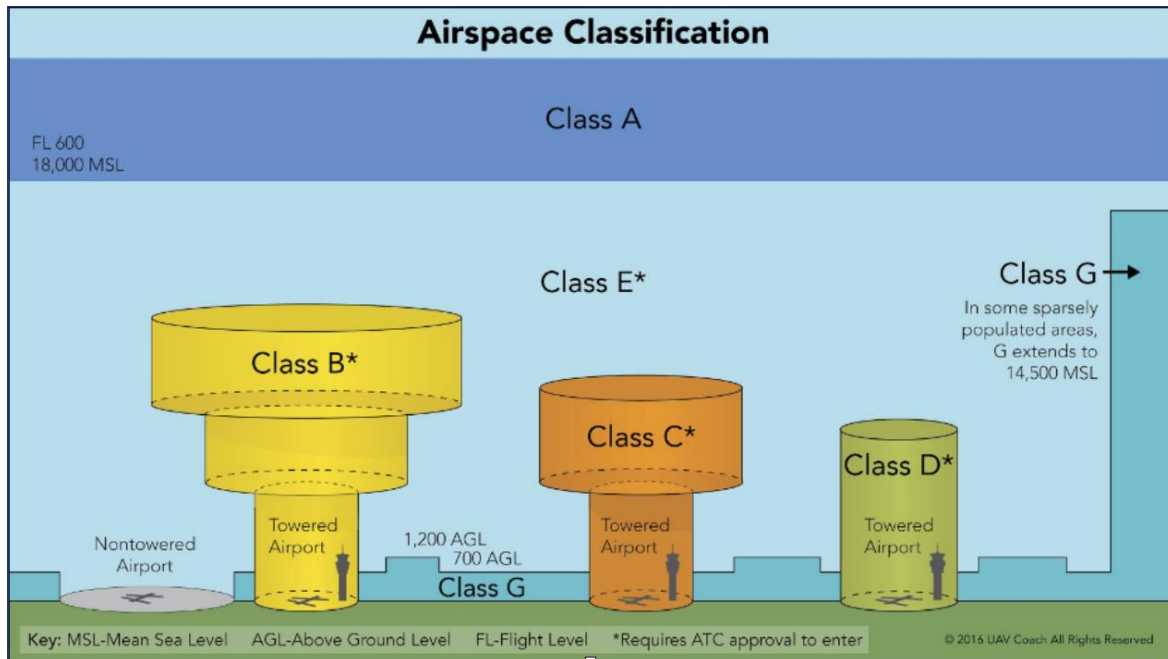
Light aircraft operating under visual flight rules (VFR) in G class airspace, are not required to have radio and may operate at any height between 500' AGL and 5000' AMSL while remaining in "G" Class airspace.

The altimetry accuracy of light aircraft is not precise and may typically be in error of 100 feet or more. Additionally, light aircraft pilots do not have a lot of information available for accurate knowledge of the height of the terrain they are flying over. The green hypsometric tint on the VTC shown at the Garrawarra area, indicates that ground level could be anywhere between 500' and 1000' above sea level. It follows that maintaining a minimum legal height of 500' above terrain is very much a judgement call. So, it also follows that the 100' buffer, between the 400' maximum height for model aeroplanes and the 500' AGL minimum height for manned aeroplanes, is a very rubbery one.

**Sectional copy of the Sydney Visual Terminal Chart (VTC):**



**Airspace Classification:**



**8. AVOIDANCE INSTRUCTIONS FOR USE BY SAFETY OFFICER/OBSERVER**

The primary means of collision avoidance used by light aircraft pilots is a practice colloquially known as “See and be Seen” or “See and Avoid”. For all practical purposes this is a very uncertain means of survival and the chances of a pilot or passenger spotting a model aeroplane in time to take evasive action is close to zero. It follows that the onus for maintaining separation between manned aircraft and model aircraft in our patch of sky rests heavily with us.

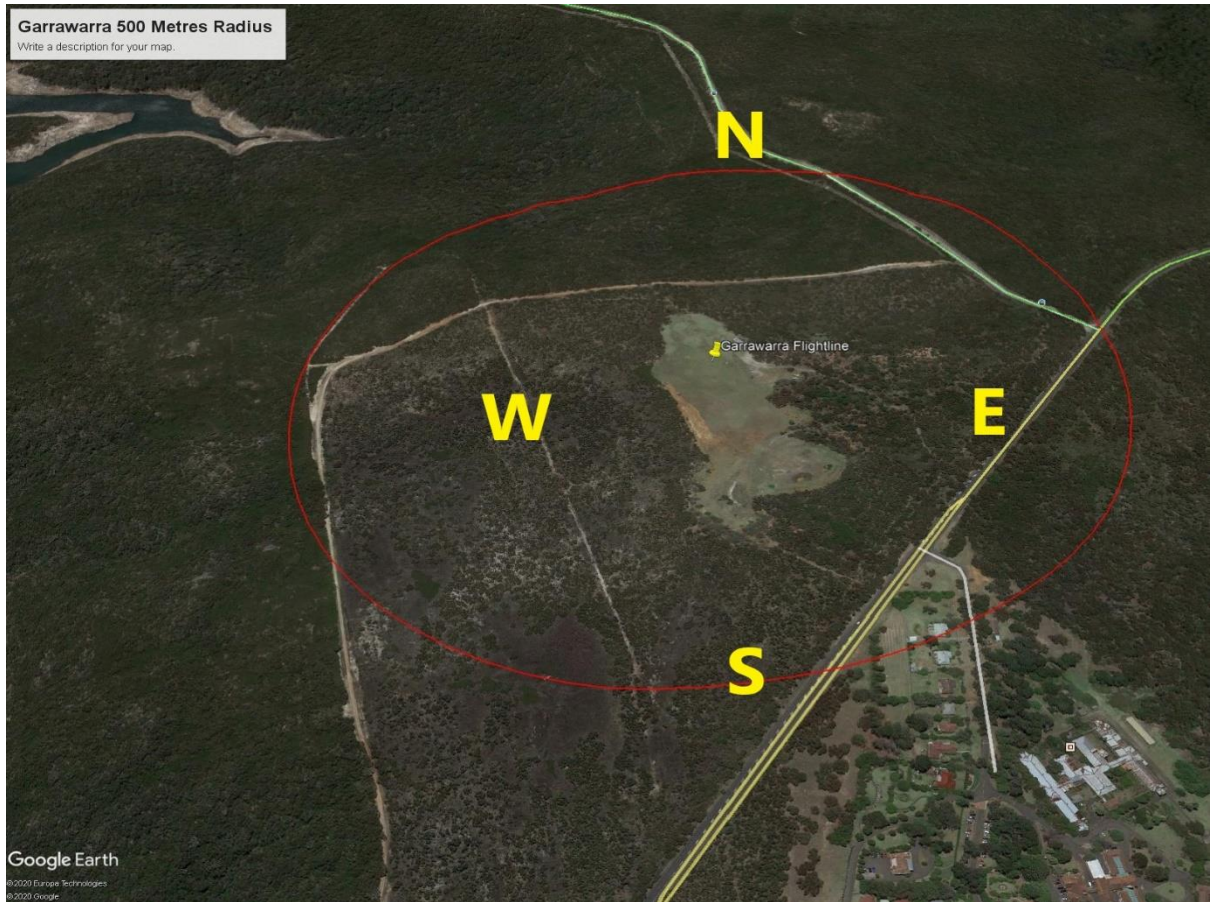
The instructions given by the safety officer must be clear and unambiguous. Every situation requiring action for collision avoidance may be different.

The CASA height approval states: *“If information comes to hand that a manned aircraft is transiting the area or operating within vicinity of the site, the appointed person must take action to ensure operators of all Model aircraft operate below 400FT AGL or are directed to land as soon as practicable safe to do so.”*

The CASA requirement applies well if time permits for models to descend prior to the arrival of an aircraft over the field. It may not always be the best course of action in the event of a sudden appearance of an aircraft flying below the height of the model aircraft. In this situation the Safety Officer/Observer must briefly pause for thought before issuing any conflict avoidance instruction.

Below is a Google Earth shot of our field showing the 500-metre radius for the above 400’ area of operation allowed by the CASA Area Approval. It also shows the direction of North, South, East and West from the flight-line.

Orientation awareness of the Safety Officer/Observer to North, South, East and West, is of primary importance for the issuing of collision avoidance instructions and should be memorised by reference to landmarks at the field so as to be totally instinctive.



Collision avoidance instructions should be simple and concise:

For Example, any or a combination of:

- Descend and land now.
- Descend below 400' now.
- Descend now.
- Maintain your present height.
- Fly North.
- Fly South.
- Fly East.
- Fly West.
- Turn Left.
- Turn Right.
- Stay where you are and maintain height, etc.

## 9. TRAINING FOR SAFETY OFFICER/OBSERVER

A short training session will be conducted at the field by a person deemed competent to do so by the CASA named person as "*the responsible person* for the club" on the current instrument of approval. Upon the "*the responsible person* for the club" becoming satisfied that the Safety Officer/Observer candidate is fully aware and capable, a letter of appointment shall be issued by the "*the responsible person* for the club".

As a minimum the candidate should be able to:

- Demonstrate an awareness of direction relative to North, South, East and West.
  - Show an ability to estimate the height of a model aircraft and/or a full-sized aircraft above the ground.
  - Project the estimated tracking path of an aircraft.
  - Be capable of issuing clear and concise instructions.
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