# Directive 3.5 – Bushfire

# SOP 3.5.3 – Ground Control of Aerial Suppression Platforms

## Introduction

1. The Ground Controller is an equivalent command function to a Sector Commander within AIIMS. The IC is to appoint a Ground Controller whenever allocated aerial suppression assets are in support of bushfire suppression activities. Aerial suppression platforms include the following:

- Fixed Wing Suppression Platforms (Fire Bombers)
- Rotary Wing Suppression Platforms (Helitaks)
- Air Attack Supervisors (AAS)

This procedure outlines the terminology and procedures members are to use when appointed as Ground Controllers. Further information is provided at Directive 3.11 – Air Operations and Directive 3.5 – Bushfires.
Directive 3.11 – Air Operations
Directive 3.5 – Bushfires

2. **Principles/Planning Factors.** The following principles/planning factors apply to all incidents where aerial suppression assets are utilised.

| PRINCIPLE | DESCRIPTION |
|---|---|
| **Strategies** | Understand the IC's objectives and strategies. Task allocated aerial suppression platforms to implement strategies to achieve the objective. |
| **Ground Crew Safety** | Brief crews as to the intended aerial suppression tasking. Provide warning of approaching aircraft so that crews are clear of the fire line. |
| **Air Crew Safety** | Assess the anticipated work area and approaches. Note hazards to aircraft and communicate details to aircrew. |
| **Communications** | Establish and maintain sound communications between the IC/IMT-GC and GC-Aerial platform. |

## Procedures

3. **Suppression Response Criteria.** It is incumbent upon the IC to carefully determine if airborne resources are justified ***before*** forwarding a request. Aerial suppression assets should only be requested if one or more of the following criteria exist.

| CRITERIA | | DESCRIPTION |
|---|---|---|
| **1** | **Crews** | Fire crews are in imminent danger. |
| **2** | **Public Safety** | Public safety is at risk. |
| **3** | **Assets** | Assets are at imminent risk. |
| **4** | **Fire Behaviour** | There are known high fuel loads and there is a likelihood of an excessive rate of spread, or extreme fire behaviour. |

4. **Roles and Responsibilities of Ground Controller.** The roles and responsibilities of a Ground Controller include the following:

| ROLE/RESPONSIBILITY | DESCRIPTION |
|---|---|
| **Maintain Tasking / IMT Strategies** | • Receive briefing from IC/IMT of strategies for aerial suppression effort<br>• Consult with AAS to implement/modify aerial suppression strategies<br>• Consulting with IMT and AAS to suspend operations if conditions compromise safety or are ineffective. |
| **Control Suppression Task** | • Brief aerial suppression asset through AAS on IMT strategy and task<br>• Select targets in consultation with IMT and AAS<br>• Inform AAS or pilots drop zone clear<br>• Provide feedback to AAS/pilots on drop accuracy and effectiveness. |
| | *Be prepared to conduct tactical aircraft operations over the fire area until the arrival of AAS* |
| **Establish and Maintain Communications** | • 5 minute and 1-minute inbound calls<br>• GC to AAS (Aerial Suppression asset)<br>• GC to IMT/IC<br>• GC to Fire line/Sector Commanders (SC) |
| **Maintain Safety of Task** | • Identify ground risks to air operations –antenna/power lines/itinerant aircraft/Drones<br>• Ensure ground crews are prepared for drops<br>• Brief and liaise with SC<br>• Confirm drop zone is clear<br>• Ensure safety standards are maintained |
| **Maintain Records** | Maintaining a log of activities |

5. **Minimum Resourcing of Ground Controller.** IC is to appoint a Ground Controller to direct aerial suppression effort. Ground Controllers are to be provided with the following resources.

| REQUIREMENT | RESOURCE | PURPOSE |
|---|---|---|
| **Communications** | Air to Ground Communications -<br>• Vehicle mounted VHF radio | GC to AAS or fire bomber pilot |
| | Ground to Ground Communications -<br>• VHF/UHF if remote from IMT location | GC- OO/IC/IMT |
| **Record** | Ground Controllers Log | Record of tasking against strategies/objectives |
| **Guidance** | • OPS-AIR-REQ-FBOM – Request for Fire Bombing<br>• Ground Controller Checklist (Annex A) | Terminology and tasking |

6. **Requesting Aerial Suppression Support.**

*Request*
Where one or more of the suppression response criteria have been met, IC is to request aerial suppression support through the ComCen. The base information for such requests is detailed at form OPS-AIR-REQ-FBOM – Request for Fire Bombing.

*Automatic Response*
On report of fire in the identified high risk areas Aerial Suppression Aircraft will be automatically deployed and will require the appointment of a GC.

7. **Communicating with Aerial Suppression Platforms.** Once appointed, Ground Controllers are to establish and maintain communications with both the aerial suppression platforms, irrespective of the presence of AAS and the IMT/IC. The primary VHF communications channel and sequence of communications by aerial suppression platforms on task are detailed at Annex A.
Annex A – Ground Controller Checklist

8. **Tasking Aerial Suppression Platforms.** Aerial suppression task tactics and terminology for use by Ground Controllers are described at Annex B.
Annex B – Tasking and Terminology

**Annexes**
A Ground Controller – Check List
B Tasking and Terminology

| SOP 3.5.3 | GROUND CONTROLLER CHECK LIST | ANNEX A |
|---|---|---|

## Safety

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|---|---|
| **General Safety Procedures** | • Brief ground crews prior to commencement of fire-bombing operations<br>• Clear drop zone upon receiving 1 minute in-bound call<br>• GC/pilot/AAS to confirm drop zone is clear<br>• Ground crews may re-enter the drop zone on GC confirmation<br>• The GC is to maintain contact with the AAS throughout continuous fire-bombing operations |
| **Standard Brief to Ground Crews** | If you are caught in the drop zone, make sure that you:<br>• Move away from the fire line<br>• Don't run or panic<br>• Watch out for falling branches and debris<br>• Place hand tools well clear<br>• Ensure your hard hat is on and secured<br>• Watch your footing<br>• Wash thoroughly with cold water if you are hit by foam |
| **Hazards to Aerial Platforms** | • Towers/Power lines<br>• Stags/Tall trees<br>• Turbulence/changing winds<br>• Other aircraft flying over the incident ground/Drones<br>• Low visibility areas<br>• Erratic/Extreme fire behaviour<br>• Terrain – especially steep gradients |

## Communications

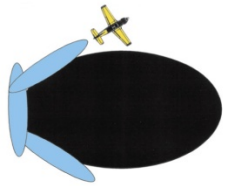
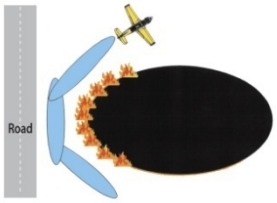
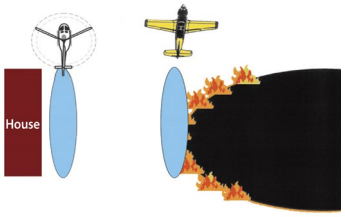
| | | |
|---|---|---|
| **Operating Channels** | **TASK** | **COMMAND CHANNEL** |
| | **Suppression** | Metro -VHF 644/621/646<br>Regional – refer Fire Bomber Operational Channels |
| | | |

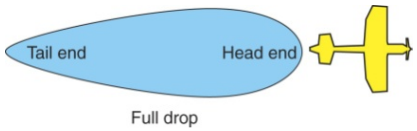
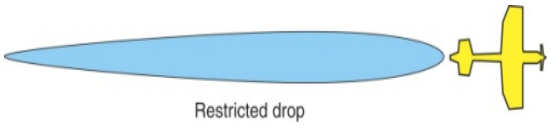
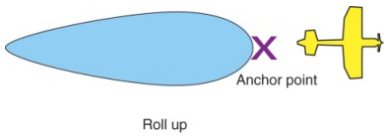
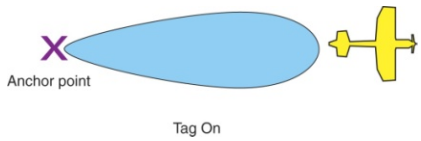
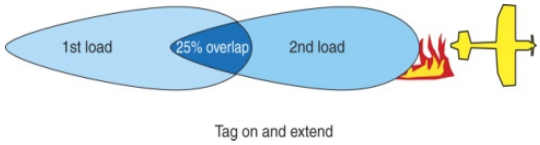
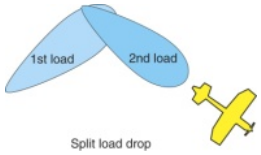
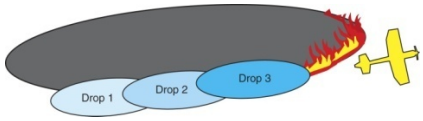
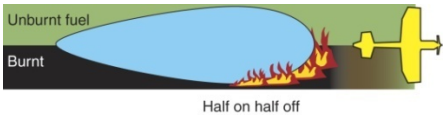
| | | | |
|---|---|---|---|
| **Callsigns** | **APPOINTMENT** | **CALLSIGN** | **EXAMPLE** |
| | **Ground Controller** | *'[Incident] Ground Control'* | Neerabup Ground Control |
| | **Fire Bomber** | *'Bomber [Number]'* | Bomber 601/602/603/604 etc. |
| | **AAS** | *'Air Attack [Number]'* | Metro: Air Attack One/five |
| | | | South West:<br>Air Attack Two/Three |
| | **Helitak** | *'Helitak [Number]'* | Helitak 671, 672 etc. |
| | | | |

| | | |
|---|---|---|
| **Standard Calls** | **5-minute inbound call** | Acknowledge. Confirm strategies, hazards and use of foam |
| | **1-minute inbound call** | Acknowledge task FW/RW and confirm drop zone clear |

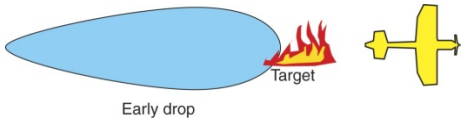
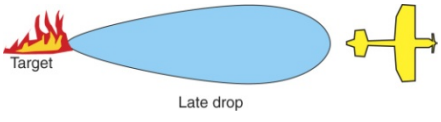
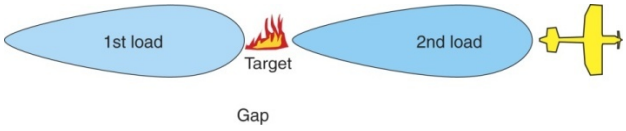
| SOP 3.5.3 | Tasking & Terminology | ANNEX B |
|---|---|---|

## Tasking

| Direct Attack | Indirect Attack | Combined Attack |
|---|---|---|
|  |  |  |

| Full Drop | Restricted Drop |
|---|---|
|  |  |
| **Roll Up** | **Tag On** |
|  |  |
| **Tag On and Extend** | **Split Load Drop** |
|  |  |
| **Line Building** | **Half On-Half Off** |
|  |  |

## Feedback

| Early Drop | Late Drop |
|---|---|
|  |  |
| **Gap** | |
|  | |

## Terminology

### Control

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|---|---|
| **Anchor point** | A reference point to start or end a drop |
| **Drift** | The expected or experienced lateral movement of a drop due to crosswind |
| **Dummy Run** | A simulated bombing run made on a target by the AAS to indicate the target and run to the bomber pilot |
| **Lead-In** | The fire Bomber is to follow the AAS on the final run |
| **Drop Length** | Distance covered on the ground by a single drop |
| **Head End of Load** | The most forward end of the load on the ground |
| **Load Width** | Width covered on the ground by a load |
| **Recce** | A low pass to assess target area by AAS or fire bomber |
| **Tail End** | The aft end of the load on the ground |

### Tasking

| | |
|---|---|
| **Tag-on** | Connect the tail end of the load to a given point |
| **Roll Up** | Connect the head end of the load to a given point |
| **Parallel Drop** | Place load beside and touching a specific reference |
| **Half On – Half Off** | Parallel drop with half the load covering the reference and half outside |
| **Split Load** | Part of the load is released, then the bombing door is closed, retaining part of the load |
| **Hold** | An instruction to hold the load and await further advice. |
| **Reload and Stay** | An instruction to the bomber pilot to return to base and cease further fire bombing operations |
| **Reload and Wait** | An instruction to the bomber pilot to return to base and wait for further instructions |
| **Reload and Return** | An instruction to the bomber pilot to return to base, reload and return to the fire |

### Drop Assessment

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|---|---|
| **Bulls-eye** | Indication of a drop placed exactly where required. |
| **Early** | The drop was (or is planned to be) short of the designated point |
| **Late** | The drop was (or is planned to be) beyond the designated point |
| **Gap** | A weak or missed area in a retardant line |

## DOCUMENT HISTORY

| VERSION | DATE | DESCRIPTION of CHANGE |
|---|---|---|
| 1.0 | Jun 2011 | New SOP created. New sections created:<br>• (All)<br>**Source documents:**<br>• FESA Ground Controller Learners Manual<br>• FESA Aviation Services internal documentation<br>***All listed SOP/SAP, now retired.*** |
| 2.0 | May 2012 | Radio channels and terminology updated<br>Reviewed content for currency. |
| 2.1 | Oct 2013 | Terminology updated. |
| 2.2 | Oct 2014 | Updated terminology and radio channels. |
| 2.3 | Jul 2020 | Reviewed by Aviation Services, updated terminology throughout.<br>Inclusion of drones as safety consideration. |