DFES Department of Fire & Emergency Services	**Directive 3.5 – Bushfire**
	SOP 3.5.3 – Ground Control of Aerial Suppression Platforms

Download Field Guide

Introduction

1. **General.** 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 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)
- Air Intelligence

This SOP 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	In-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	Reconnoitre the anticipated work area and approaches. Note hazards to aircraft and communicate details to air crew.
Communications	Establish and maintain sound communications between the IC/IMT-GC and GC-Aerial Asset.

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 • Consult with AAS to implement/modify aerial suppression strategies • 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 • Select targets in consultation with IMT and AAS • Inform AAS or pilots drop zone clear • 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 • GC to AAS (Aerial Suppression asset) • GC to IMT/IC • GC to Fire line/Sector Commanders (SC)
Maintain Safety of Task	• Identify ground risks to air operations - antenna/power lines/itinerant aircraft • Ensure ground crews are prepared for drops • Brief and liaise with SC • Confirm drop zone is clear • 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 • VHF radio	GC-Aerial Asset
	Ground to Ground Communications • VHF/UHF if remote from IMT location	GC-IC/IMT
Record	Ground Controllers Log	Record of tasking against strategies/objectives
Guidance	• OPS-AIR-REQ-FBOM – Request for Fire Bombing • SOP 3.5.3 (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.

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

Annexes

A Ground Controller – Ready Reckoner
B Tasking and Terminology

SOP 3.5.3	GROUND CONTROLLER – READY RECKONER	ANNEX A

Safety

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

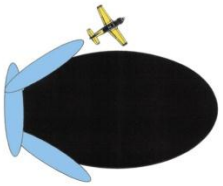
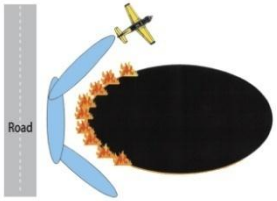
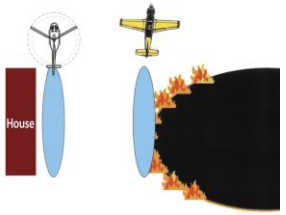
Communications

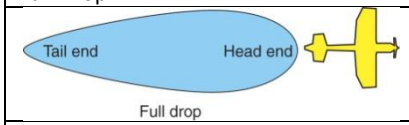
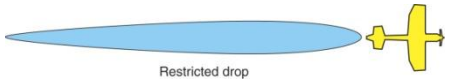
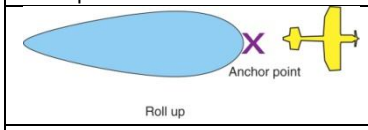
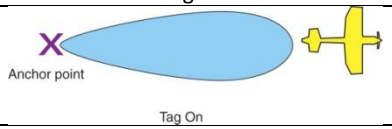
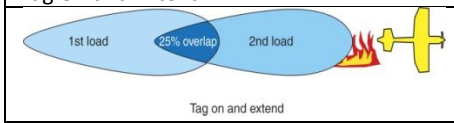
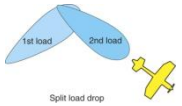
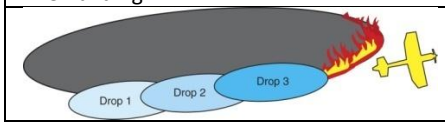
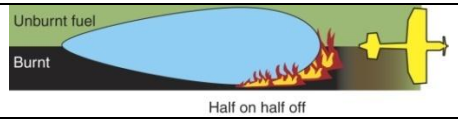
Operating Channels	**TASK**	**COMMAND CHANNEL**
	Suppression	Metro -VHF 644/621/368 Regional – refer Fire Bomber Operational Channels
	Air Intelligence	VHF 369

Call signs	**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: Air Attack Two/Three
	Helitak	*'Helitak [Number]'*	Helitak 671, 672 etc.
	Air Reconnaissance	*'Air Intel*	

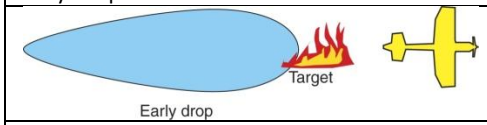
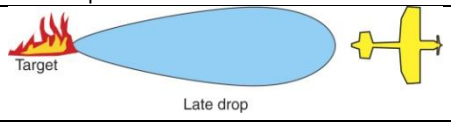
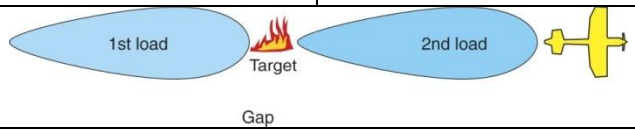
Standard Calls	**5 minute inbound call**	Acknowledge. Confirm strategies, hazards and use of foam
	1 minute inbound call	Acknowledge task FW/RW and confirm drop zone clear

Tasking

Direct Attack	Indirect Attack	Combined Attack
		

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

Feedback

Early Drop	Late Drop
	
Gap	
	

Terminology

Control

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

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

AUTHOR	POSITION	VERSION	DATE	DESCRIPTION of CHANGE
A.J. Hinton	OIO	1.0	Jun 11	New SOP created. New sections created: • (All) **Source documents:** • FESA Ground Controller Learners Manual • FESA Aviation Services internal documentation ***All listed SOP/SAP, now retired.***
A. Bannister	Air Ops	2.0	May 12	Radio channels and terminology updated Reviewed content for currency
A. Bannister	Air Ops	2.1	Oct 13	Terminology updated
A. Bannister	Air Ops	2.2	Oct 14	Update terminology and radio channels