



NSW RURAL FIRE SERVICE



OP 1.2.17

OPERATIONAL PROTOCOL FOR RAPID AERIAL RESPONSE TEAMS (RART)



Document control

Release history

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2.1	December 2017	Simon Topp	Amended Document to reflect activation triggers and other minor operational variations
2.2	March 2019	Simon Topp	Draft
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Related documents

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RART Activation Triggers (Appendix A)	V4
Interagency Aviation SOPs	2018

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1 Links

Interagency Aviation SOPs (2018)

2 Superseded Procedure

OP 1.2.17 (2011)

3 Purpose

3.1 Document

The purpose of this Operational Protocol is to provide Incident Controllers (ICs), Incident Management Team (IMT) members, District Officers and State Operations staff with Operational Procedures and associated guidelines regarding the deployment of NSW RFS Rapid Aerial Response Teams (RART).

3.2 Capability

The NSW RFS and NPWS both manage a RART programme. RART is a pre-emptive activation of helicopter(s) with Remote Area Firefighting Teams (RAFT) when an elevated risk of new remote fires exists. The key objective of the programme is to control remote small fires before they develop into larger fires. RART is not intended to be committed to one incident for an extended period of time.

3.3 Firefighting Capability

A NSW RFS RART comprises 3 or 4 Remote Area Operators (RAOs), a medium winch capable helicopter, Pilot and Air Crewperson. The firefighters will have access to remote area firefighting equipment, which usually includes chainsaws, leaf blowers and hand tools. The helicopter will come standard with a water bucket to support the firefighters on the ground.

4 Hazards and Precautions

4.1 Inherent Risks

The RART programme has inherent hazards as with all remote area and aviation operations. Incidents attended by RART are in their early stages and are not often risk assessed nor thoroughly appreciated prior to the arrival of RART. Hazards include:

- Fire overrun
- Fire weather and behaviour
- Working at heights or in steep terrain
- Potential for dehydration, exhaustion and heat stress
- Helicopter related operations
- Falling branches/trees

4.2 Risk Management

Risk is minimised by the implementation of a variety of controls. These controls include:

- Weather and activation triggers
- Aircraft standards
- Winching standards
- Daily briefings
- State level oversight (RART Coordinator)
- Communications planning
- Training and currency requirements
- Crew dynamic risk assessments and an ingrained Crew Resource Management (CRM)¹ culture

¹ Crew Resource Management and its principles are covered in-depth within the Crew Safety and Welfare component of Advanced Firefighter Training.

4.3 Deployment Risk Assessment

Overhead each fire and prior to taking further action, a dynamic risk assessment must be completed by the RART Crew Leader in conjunction with the Pilot in Command and Air Crewperson and RART Firefighters. This dynamic risk assessment must consider:

- Fire behaviour
- Current and forecast weather
- Refuge areas
- Method of insertion
- Actions if stranded/isolated
- Personnel factors (e.g fatigue)
- Communications
- Aviation factors and capabilities

4.4 Limitations

The firefighting capability of a RART is limited. A fire is usually beyond the ability for RART to control when:

- The fire has a noticeable rate of spread
- The fire is larger than 3 hectares

4.5 Crew Resource Management²

The principles of CRM should be utilised to minimise the chance of and impact of any human errors. In particular, any operation must be aborted or placed 'on hold if at any time a Firefighter, District Staff Member, Incident Controller, RART Coordinator or Member of the Aircrew are concerned for the safety of the RART.

5 Personal Protective Equipment & Clothing (PPC/E)

PPE and PPC for RART reflect Service Standard 5.1.5-1 (2.2 *Bush Fire and non BA Firefighting PPC*) with the single exception of the Helmet and Helmet Accessories.

5.1 Helmet for RART

Given specific and identified risks and functionality requirements of RART operations, only helmets approved for remote area firefighting may be used for RART.

6 Training and Personnel

6.1 Training Qualifications

Only personnel who hold both the following qualifications are able to participate in RART operations:

- Operate in Remote Environments (ORE) or Remote Area Firefighter (RAF)
- Helicopter Insertion Techniques (HIT)*

*HIT has a 14-month currency period. RART personnel must hold a current HIT qualification.

6.2 Medical and Fitness Currency

Only personnel who have a current NSW RFS Arduous Medical and Fitness Test (Arduous Pack Test) can participate in RART operations.

² As per footnote 1.

6.3 RART Composition

6.3.1 RART Size

The RART crew size (excluding aircrew) must be at least 3. Where practical and possible 4 firefighting crew should be used.

6.3.2 Crew Leader

Every RART must have at least one member qualified in Crew Leader Wildfire (CLW).

6.3.3 First Aid

Every RART must have at least 1 member current in First Aid Application (FAA).

7 Operational Procedures

7.1 Planning a RART Standby

7.1.1 RART Triggers

The potential for new fires is the primary focus of RART Activation Triggers (Appendix A). RART triggers represent key opportunities for responding to and containing new fires.

7.1.2 Activation

The decision, timings and locations that RART is to standby is to be determined and authorised by the Director, Response and Coordination or State Duty Operations Officer (SDOO) and/or State Operations Controller and will generally be activated in line with the RART Activation Triggers (Appendix A).

Discussion regarding the planning and strategic needs for RART should occur and will involve:

- State Duty Officer/State Operations Controller
- Manager, State Operations
- NSW RFS Aviation Duty Officer
- National Parks and Wildlife Service RART Staff
- RAFSO Duty Officer

Decisions on the locations and timings of NSW RFS RART will be made with NPWS RART locations in mind. RART locations should be considered complimentary but response areas should not significantly overlap unless a specific decision is made – justified by a higher than normal chance of fires occurring in a defined area.

7.1.3 Resourcing

The resourcing of personnel for RART is coordinated by Operational Support..

7.1.4 Aircraft Requests

RAFSO Duty Officer will request aircraft from the State Air Desk (SAD).

7.1.5 RART Operational Notifications

The RAFSO Duty Officer or RART Coordinator will contact districts in the operational response area of RART to advise:

- Standby timings
- Helipad location
- Area covered
- Dispatch contact details

7.1.6 Firefighting Equipment

RART firefighting equipment will be supplied or organised by the RAFSO Duty Officer. On occasions RART members may be requested to bring their district firefighting equipment to a RART Standby.

7.1.7 Personal Requirements

RART Firefighters are supplied with and must bring the following minimum equipment to a RART standby:

- Full PPC
- RART daypack including:
 - First aid kit
 - 3L minimum of water
 - Emergency food rations
 - Space blanket

7.2 RART Standby Procedures

7.2.1 RART Coordinator

A RART Coordinator must be appointed and on duty while RART operations are being undertaken. Unless approved by the SOC/SDOO the RART Coordinator will be established at NSW RFS State Operations.

7.2.2 RART Pre-Deployment Tasks

Prior to being available for response, the following must be completed daily:

- RART Coordinator has provided a daily briefing and discussed daily risks with the RART and Aircrew. The briefing must include weather and current fire activity in response area.
- The crew is provided with prior authorisation to winch by the RART Coordinator
- Aircrew has provided an aircraft briefing
- Aircrew has provided a winch briefing
- Firefighting equipment has been checked for operational readiness
- Communication plan has been developed and checked
- Aircraft is configured appropriately, loaded and fuelled
- Once available for response, the RART CL will notify the RART Coordinator

7.2.3 Flight Manifest

The RART Coordinator is to ensure a passenger manifest is completed and recorded prior to the commencement of a standby.

7.3 RART Response

7.3.1 Request for RART Response

A District can request the response of RART by telephoning the RART Coordinator on the dispatch number provided in the standby advice notifications. The following information should be provided by the requesting officer:

- Fire location (Latitude/Longitude) - Required
- Local FIRECOM channel - Required
- Other resources responding/on scene
- Other aircraft operating on fire or requested - Required
- Threats and Hazards (if known)

At this stage the suitability of the incident is assessed by the RART Coordinator and, if appropriate and available, RART may be tasked.

7.3.2 RART Dispatched

The RART Coordinator will contact the RART Crew Leader with the incident details and provide authorisation for the RART to respond. The RART Coordinator will ensure that appropriate communication plan is implemented with the RART and requesting District.

7.3.3 State Operations Request for RART

At times personnel working in State Operations may request RART to attend an incident. The RART Coordinator must notify the District DO or IMT that RART will be attending their incident.

7.3.4 RART Dispatch Notifications

Once the RART is responded to an incident, the RART coordinator must liaise with:

- The requesting District DO or IMT
- The State Aviation DO
- NPWS RART Coordinator (If NPWS tenure is involved)
- The State Duty Operations Officer or State Operations Controller
- The MIC

7.3.5 Multiple Requests for RART

If multiple requests for a response are received, the RART will be deployed to the first call. However, the RART Coordinator, in consultation with the affected SDOO/MIC/SOC shall determine the priorities of response and may redirect the RART.

7.3.6 RART En-Route

RART will contact the requesting District FIRECOM as soon as possible en-route to the incident.

7.3.7 Flight Following

The RART Coordinator is to ensure that flight following is conducted by either State Operations, District FIRECOM or the RART Coordinator.

7.4 RART Allocated to an Incident

7.4.1 RART SITREP and Intelligence

RART will provide a SITREP using the ITASC format to FIRECOM once overhead the fireground:

- I – Incident Details (Location, size, behaviour)
- T – Threats (Current or potential threats)
- A – Actions (RART Intentions and Strategy)
- S – Support (Additional requirements and duration)
- C – Command (Communications and command arrangements)

RART should also gather and disseminate further intelligence including photographs, GPS points, GPS tracks and be communicating with ground crews.

7.4.2 Operational Command

The operational management of a RART, once committed to an incident, transfers to the IC of the incident. However, the RART Coordinator will liaise with the District to ensure that RART is being used effectively, to offer support and to discuss arrangements for replacement of RART.

7.4.3 RART Deployment Duration

RART is allocated to a District as an initial response resource. While the hosting District has operational control, the RART Coordinator retains the authority to redeploy the RART in consultation with the District or IC. RART will generally remain on scene for a maximum of 2-3 hours in which time the District should be arranging replacement resources.

7.4.4 RART Re-Deployment

The RART Coordinator retains the authority to re-deploy the RART if higher priority or more appropriate taskings are identified. Re-deployments will occur in consultation with the SDOO, SOC, Director - Response and Coordination and affected District.

7.4.5 Fireground Risk Assessment

Overhead the fire, it is the responsibility of the RART CL to ensure all involved undertake a thorough dynamic risk assessment of the environment, helicopter insertion and proposed mission. This risk assessment process involves members of the RART and the Aircrew.

All involved personnel must approve of the mission and insertion method in order for the operation to proceed.

7.4.6 Confirmation of Insertion

The RART CL, in consultation with the RART Crew and Aircrew, will make a determination whether or not the RART insertion takes place. The Pilot in Command will make the final determination.

7.4.7 Insertion/Extraction Method

There are 3 options available for aerial insertion and extraction. In order of preference (based on risk) they are:

1. Land
2. Hover Entry/Exit
3. Winch

Winching must only be undertaken when other options are not possible or practicable.

7.4.8 Safety

If at any stage during the deployment the IC, District Staff, RART Coordinator, Aircrew members or RART Firefighters become concerned with the safety and welfare of the RART, they can authorise the need for immediate extraction or relocation to a safe area.

8 Operational Guidance

8.1 Suitability of Deployments

RART should not be committed to an incident where the tasking is for 'water bombing' only. If a water bombing helicopter is required, it should be requested by the District or IMT through normal aircraft request processes. The RART helicopter should only be used to support the RART working on the ground.

8.2 Operations Log

An operations log should be kept by the RART Coordinator covering all RART operations.



RART Activation Triggers

Appendix A (Version 4)

FDR for Coverage Area	TRIGGER 1	TRIGGER 2	TRIGGER 3	OUTCOME
LOW - MODERATE	Drought Factor \geq 6	Previous Lightning (24hr) or Forecast LAL	FFDI > 25 next 72hrs	RART
HIGH	Drought Factor \geq 6	Previous Lightning (48hr) or Forecast LAL	FFDI > 25 next 72 hrs	RART
VERY HIGH	Drought Factor \geq 6	Previous Lightning (96hr) or Forecast LAL		RART
SEVERE, EXTREME & CATASTROPHIC				Helicopter SAR

It should be noted that the above trigger set is a guide and that additional circumstances may justify the need to activate or deactivate RART.