



NSW RURAL FIRE SERVICE



OP 1.4.7 OPERATIONAL PROTOCOL FOR TRAIL BIKE OPERATIONS



Document control

Release history

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2.1	November 2017	Simon Topp	Significant modification based on changes to the programme
2.2	October 2018	Naju Mehra	Feedback from DRC and MSO

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1 Links

SS 3.1.4 Arduous and Remote Firefighting (Final draft with R&C for comment).

Operational Protocol 1.2.19 (Medical Evacuation of Fireground Personnel)

2 Superseded Procedure

Nil

3 Purpose

The purpose of this Operational Protocol is to provide Incident Controllers (ICs), Incident Management Team (IMT) members, District Officers and Trail Bike Riders with operational procedures and associated guidelines regarding the deployment of NSW RFS Trail Bikes.

3.1 Capability

The NSW RFS Trail Bike programme utilises Trail Bike Teams (TBTs) consisting of two Riders. A TBT will carry with them equipment for basic firefighting, communications, first aid, navigation and basic bike maintenance. TBTs are able to be deployed for a number of purposes. These include:

- Response to fires or incidents in difficult to reach areas
- Direct attack firefighting
- Reconnaissance missions
- Intelligence gathering
- Patrols
- Fire trail inspections & clearance operations
- Assist other agencies e.g. land search rescue operations
- Install or maintain portable radio repeaters
- Aviation Bombing Ground Support Operations

It is anticipated that the trail bikes will be able to be deployed for a maximum of a 12-hour shift. The fuel duration of the bikes will be approximately 140km when fully loaded. The TBTs may be able to refuel in the field if there is a suitable service station or NSW RFS vehicles carrying sufficient unleaded fuel.

3.2 Firefighting Capability

The firefighting equipment kits which may be carried by TBTs include:

Chainsaw Kit:

- 1 x Small or Medium Chainsaw
- 1 x McLeod Tool

Blower Kit:

- 1 x Small Leaf Blower
- 1 x McLeod Tool

Foam Kit 1:

- 1 x Compressed Air Foam System (12L Class A Foam)

Foam Kit 2:

- 1 x IFEX Impulse Gun (13L Class A Foam)

Each kit can be carried on a bike. Typically, 2 of the above will be selected by the Team to carry based on the tasking. Equipment selection is undertaken by the TBT dependant on taskings.

4 Hazards and Precautions

4.1 Inherent Hazards

The riding of Trail Bikes is an inherently hazardous activity. Significant identified risks include:

- Riders falling from or with a trail bike
- Riders colliding with a stationary object
- Riders colliding with moving vehicles
- Traffic accidents
- Bush Fire overrun

4.2 Risk Management

Risk is minimised throughout the programme by a variety of controls. Every deployment requires thorough consideration of the specific risks associated with the incident or activity.

4.3 Risk Assessment

An operational risk assessment tool is provided in this document as 'Appendix A' and must be completed by the requesting authority in consultation with the TBT prior to any deployment.

4.4 Dynamic Risk Mitigation Tool

TBTs should regularly conduct dynamic risk assessments while riding. A 'FACT' check will assist with riders with this process:

F – Fire or other environmental hazards.

A – Ability of the riders to undertake the tasks

C – Communications are reliable

T – Terrain or track conditions

4.5 Safety Triggers

As with all resource taskings consideration to safety should be given when deploying TBTs during times when the Fire Danger Rating is, or is forecast to be 'Severe' or above. Based on the nature of the environment or the tasking the risk assessment should consider:

- Trigger points for aborting the deployment,
- Unsafe areas for the TBT
- Ensuring regular and reliable communications between FIRECOM and the TBT to ensure situational awareness is maintained

Such risks and control measures must be recorded in the risk assessment tool in Appendix A.

4.6 Limitations

It is important to acknowledge the limitations of a TBT resource. It is not anticipated that TBTs can contain fires which exhibit any of the following characteristics:

- Greater than 1.5m average flame height
- Greater than 1 Hectare
- A noticeable rate of spread

4.7 Crew Resource Management

The principles of Crew Resource Management (CRM)¹ should be utilised to minimise errors. In particular, any tasking must be aborted or placed 'on hold' if at any time a Rider, District, IC or IMT Personnel are concerned for the safety of the TBT.

5 Personal Protective Equipment & Clothing (PPE/C)

5.1 Riding PPE/C

For any NSW RFS Trail Bike riding activity each rider must wear all of the following as issued by the NSW RFS:

- Motorcycle helmet
- Goggles (anti-fog)
- Trail bike armoured jacket
- Riding gloves
- Knee/shin guards
- Bush Fire trousers
- Riding boots

5.2 Bush Fire PPC

Standard NSW RFS Bush Fire PPC that is not being worn during the ride must be carried on the bike by all Riders to allow them to don appropriate bush fire PPC upon arrival at a fire.

5.3 First Aid Kit

At least one personal first aid kit must be carried by a TBT.

5.4 Personal Locator Beacon

A Personal Locator Beacon (PLB) must be carried by every TBT as an emergency communication device. A PLB must only be activated in an emergency (such as a medical emergency) and when no other forms of communications are available.

6 Training and Personnel

6.1 Pre-Requisites

The pre-requisites to participate in any Trail Bike Training are:

- Advanced Firefighter Qualifications*
- Current First Aid Application (FAA)
- Current Arduous Medical
- Current Arduous Pack Test
- Current Unrestricted Australian Motorcycle Licence

** For newer AF Qualifications, riders will need at least the following: Wildfire Behaviour (WFB), Navigation (NAV) and Crew Safety and Welfare (CSW).*

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

Additionally, to ensure riders have existing riding skills a pre-course riding assessment may be introduced as a pre-requisite to selection on training courses.

6.2 Training and Qualifications

The minimum training for any Trail Bike Rider is provided in the form of a Trail Bike Operations (TBO) course. This training is offered at a state level and coordinated by Operational Support. TBO is the minimum qualification required for NSW RFS personnel in order to operate NSW RFS Trail Bikes.

7 Operational Procedures

7.1 Operational Management

The District or IMT staff are responsible for the operational management of a TBT.

7.2 Trail Bike Operations Deployment Plan

A Trail Bike Operations (TBO) Deployment Plan must be developed in consultation with the TBT and include TBT taskings, routes, equipment and communications plan. The deployment plan must also refer to a medical plan². This information may be included in an Incident Action Plan (IAP) if one exists. A tool to assist in the development of a TBO Deployment Plan is provided in Appendix B.

7.3 Deployment Briefing

A clear and comprehensive briefing must be provided by the District, IMT Operations or delegate to a TBT prior to any deployment. The briefing should be in line with SMEACS:

- **Situation**- Current and predicted fire activity/weather
- **Mission** – Summarise the objectives
- **Execution** – Strategy and Tactics
- **Administration** – Assistance and Logistics
- **Command** – Command, Control and Communications
- **Safety** – Safety Hazards

The briefing should summarise and complement the TBO Deployment Plan (or IAP) and Risk Assessment Tool.

7.4 Trail Bike Team Structure

A TBT has a minimum of 2 x Riders. At least one rider must be qualified in Crew Leader Wildfire (CLW). Both Riders must be qualified and current in First Aid Application (FAA). Depending upon the risk assessment, Crew Leader Grassfire (CLG) may be more appropriate than CLW.

7.5 Response Riding

NSW RFS Trail Bikes will **NOT** 'respond' to incidents and are not provided exemptions from road rules.

7.6 Use of Flashing LEDs

The red and blue LEDs are fitted to the bikes for the primary purpose of ensuring high visibility at incidents particularly in smoke and around other emergency vehicles. Trail bike red and blue LEDs must **NOT** be used en-route to an incident or while travelling on public roadways in accordance with 7.4 Response Riding.

² Refer to Operational Protocol 1.2.19 (Medical Evacuation of Fireground Personnel).

7.7 Tenures and Permissions

Districts and or IMTs overseeing TBTs are responsible for all permissions to enter managed lands, roads or trails. Consideration should be given by the IMT to the impact of trail bikes entering such areas – and relevant permission sought.

7.8 Pre-Planned Deployments

Trail Bikes can be activated or deployed as required by the District or IMT. Deployment of NSW RFS Trail Bikes must only occur with authorised riders and once the District considers the particular risks of the operation. Pre-planned deployments may include:

- Deployment to identified fires
- Deployment for reconnaissance or intelligence purposes
- Deployment at larger fires to assist in patrol or standby for fire breaches
- Deployment for fire trail inspections

7.9 Trail Bike Proactive Standby

TBTs may be activated on certain days where there is an elevated risk of fires starting or being detected. During these days a TBT may be placed on standby for immediate deployment at a location determined by the District or State Duty Operations Officer.

In addition to providing a direct attack capability, a quick deployment of a TBT will provide an opportunity to gather intelligence and undertake reconnaissance of fires and contribute to identifying potential containment options early.

7.10 Communications

Regular communications is not only essential for operational awareness but for safety. If any method of communications with FIRECOM or an appropriate level of Fireground Command is unavailable, TBT operations must not continue until an alternate communications method is in place.

Each TBT will carry two PMR/GRN/Field Operations Radios and two Fireground Radios. A satellite phone may also be appropriate pending the risk assessment outcomes. The TBT must provide a 'SAR Call' at least every 30 minutes (similar to aircraft flight following). It is the responsibility of both the TBT and the Communications Centre to ensure these regular communications occur.

7.11 Search and Rescue Arrangements

If a TBT is uncontactable for longer than 30 minutes the District or IMT must take action to regain communications with the team. E.g. Diverting resources to ascertain the TBT's welfare on VHF Fireground channels.

The following search and rescue arrangements are to be implemented if a Trail Bike Team becomes overdue by more than 60 minutes.

- Divert all available local fireground resources from taskings to locate or communicate with TBT
- Notify State Duty Operations Officer (SDOO)
- Notify Police of missing TBT

7.12 Command Structure

For command and control purposes, a TBT must be considered as a standard incident resource. On the fireground a TBT team integrates into the operations structure and reports to relevant fireground commanders.

7.13 Maintenance

Riders are responsible for maintaining the trail bikes and associated equipment during and following their standbys or deployments. The following tasks need to be completed following any use of the bikes by Riders or TBTs:

- Refuel bikes
- Clean/Wash bikes
- Inspect and report on any mechanical issues
- Inspect, clean and restow firefighting equipment
- Clean, refuel and sharpen chainsaw
- Recharge radio batteries
- Place bike batteries on charge
- Check fluids
- Report damage or missing equipment
- Complete log book or running sheets.

8 Operational Guidance

8.1 Resourcing Local Riders and Equipment

Where a district has its own allocated Trail bike Unit, the District and/or IMT are responsible for resourcing Riders and equipment through local pre-arranged call out procedures. It is the responsibility of both the District and the Riders to ensure that the pre-requisites for trail bikes are current for any rider being deployed.

8.2 Out of Area (OOA) Requests

OOA requests for Trail Bikes and Riders may be arranged through existing resource request procedures using a SAP 2 form forwarded through standard request processes to a district(s) with an allocated Trail Bike Unit.

8.3 Deployment Method

As a default, Trail Bikes Teams are deployed to an incident in a vehicle with the trailer and bikes in tow.

However, following consideration of risks, distance, equipment and fuel requirements, it may be appropriate and more efficient for the trail bikes to be deployed independent of their vehicle and trailer. These options should be discussed between the TBT and District during a deployment planning and/or briefing.

8.4 Trail Bike Call Signs

Default radio call signs for a TBT will include either:

1. The location from which they are based. E.g. ***“Northern Tablelands Trail Bikes”***
or
2. If a composite team exists, or multiple teams are operating in one area then TBTs can be allocated a phonetic letter. E.g. ***“Trail Bike Team Alpha”***

TBT radio call signs must only refer to the team. At all times bikes will operate in pairs and the call sign will represent the team rather than an individual bike or rider.

8.5 Communications Planning

The PACE communications planning model (See below) should be planned for and used for Trail Bike Requests:

PPrimary – Primary Communications Channel. e.g. PMR/GRN

Alternate – Secondary Communications Channel. e.g. fireground or simplex channels

Contingent – Backup Communications. e.g. Satellite Phone

Emergency – Emergency communications. e.g. PLB

8.6 Equipment

A complete equipment list is provided in Appendix C.

8.7 Vehicle Running Sheets

Trail bikes will be an asset in SAP EAM. Vehicle running sheets will need to be uploaded into SAP EAM on a regular basis by district staff. These sheets can also be a record of rider currency showing when riders have ridden.