



— Centre of Excellence —  
**PRESCRIBED  
BURNING**

# Prescribed Burning Training Competencies and Delivery Review



A PRODUCT OF THE NATIONAL BURNING PROJECT

APRIL 2018



An Australian Government Initiative



Australian Institute for  
Disaster Resilience



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To be cited as: AFAC (2018) ) Prescribed Burning Training  
Competencies and Delivery Review, Australasian Fire and  
Emergency Service Authorities Council Limited (Melbourne:  
Victoria)

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Associates and AFAC from consultation and research  
between Forest Fire Management Group (FFMG)  
and AFAC, its member agencies and stakeholders. It  
is intended to address matters relevant to fire, land  
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## AGENCY ABBREVIATIONS

Below is a list of AFAC/FFMG member and affiliated agencies that participated in this sub-project and the abbreviation this report uses for these agencies.

**Table 1** Agency abbreviations

Jurisdiction	Agency	Abbreviation
ACT	Parks and Conservation Service	PCS
NSW	Fire and Rescue NSW	FRNSW
NSW	Forestry Corporation of New South Wales	FCNSW
NSW	NSW Rural Fire Service	NSW RFS
NSW	Office of Environment and Heritage	OEH
NT	Bushfires NT	NTB
NT	Northern Territory Fire and Rescue Service	FRS
NZ	New Zealand Fire Service	NZFS
QLD	Department of National Parks, Sport and Racing, Queensland Parks and Wildlife Service	QPWS
QLD	Queensland Fire and Emergency Services	QFES
QLD	Hancock Queensland Plantations	HQP
SA	Department of Environment, Water and Natural Resources	DEWNR
SA	South Australian Country Fire Service	CFS
TAS	Forestry Tasmania	FT
TAS	Parks and Wildlife Service	PWS
TAS	Tasmania Fire Service	TFS
VIC	Country Fire Authority	CFA
VIC	Department of Environment, Land, Water and Planning	DELWP
WA	Department of Fire and Emergency Services	DFES
WA	Department of Parks and Wildlife	DPaW

**Table 2** Other abbreviations

Full title	Abbreviation
Australasian Fire and Emergency Service Authorities Council	AFAC
Forest Fire Management Group	FFMG
Public Safety Training Package	PSTP
Registered Training Organisation	RTO

## EXECUTIVE SUMMARY

As a sub-project of the National Burning Project, the Prescribed Burning Training Competencies and Delivery Review aims to improve national prescribed burning practice by improving the content and delivery of training. To deliver on the sub-project, Ewan Waller and Associates conducted a survey of prescribed burning training within the AFAC member agencies, visited agency representatives in each state and territory, and facilitated a national workshop to consider recommendations.

The survey indicated the agencies did not distinguish between the operational management arrangements for prescribed burning and for fire suppression. They used the structure and principles of the Australasian Inter-Service Incident Management System (AIIMS) or an AIIMS-like system for managing both contexts. The training for crew member, crew leader and sector commander roles were the same for both fire suppression and for prescribed burning, and the normal training for AIIMS roles applied to most other roles. All agencies identified a cluster of competencies for each prescribed burning role, but the combination of competencies was different for each agency.

The agencies agreed the people planning and managing the ignition of prescribed burns needed specific training and most had well-developed courses for these roles, incorporating the national units of competency in prescribed burning. Many of the issues confronting the agencies in delivering training related to the workload involved in administering accredited training through the agency Registered Training Organisation (RTO) and the workload of trainers and assessors.

A more national, consistent and collaborative approach to prescribed burning training should help to alleviate these issues and also reduce the risks of prescribed burning: assisting to build government, industry and community confidence in agency prescribed burning practice. Additional benefits will be improved agency interoperability and the potential for increased burning across all land tenures.

All agencies indicated they prefer to retain control over the delivery of their prescribed burning training, in order to meet their specific agency needs, and a more national approach can best be achieved through supporting agency trainers and practitioners. This support could include a national approach to developing trainers, the occasional interchange of trainers, provision of a pool of additional trainers and approved contractors, and the sharing of information and experience.

Agencies agreed a national centre of excellence for prescribed burning could potentially coordinate the professional development needs of both prescribed burning trainers and prescribed burning practitioners, as well as the needs of other user groups.

Ewan Waller and Associates identified there was no need for any new units of competency in prescribed burning and recommended the current units be strengthened to incorporate the outputs from the risk management projects in the National Burning Project and more detail on lighting patterns. Additionally, they noted many agencies now have large and complex burning programs, and senior managers have an increased need to develop strategic program planning and environmental management skills. Rather than develop new competencies, national workshops could potentially meet these needs.

The agencies agreed that standard nomenclature and a standard suite of competencies for each prescribed burning role was fundamental to a national approach. At their workshop in March 2017, agency representatives supported developing standard Skill Sets for key prescribed burning roles

within the Public Safety Training Package (PSTP), which could be used as the minimum training requirement in interjurisdictional resource exchange.

A significant identified issue was the training needs of non-fire agencies and groups that conduct prescribed burning on the land they manage. These include local government, landholders and indigenous groups, in particular the land councils in northern Australia that have extensive burning programs. Although the agencies were not resourced to provide the training to these groups, they saw benefit in providing direction and suggesting training options, such as maintaining a register of suitable private training providers, developing skill sets in the PSTP for use by community groups and local landholders, and tailoring training materials for the northern Australian context. The needs of these groups could also potentially be met through a centre of excellence for prescribed burning.

## SUMMARY OF RECOMMENDATIONS

Ewan Waller and Associates make the following recommendations to the AFAC and FFMG. The section number in brackets indicates the document section with the relevant discussion (for electronic documents, press Ctrl + Click to follow the link).

### Section 5 - Recommendations to improve training delivery

1. Prescribed burning training should relate to the principles of prescribed burning, supported by examples in the local fuel types, with competency in other fuel types built through experience over time (Section 5.2.1 );
2. Agencies should use accredited training for prescribed burning roles, as the units of competency provide a national training standard and the RTO standard provide quality assurance of training delivery (Section 5.2.4);
3. Standard national minimum training requirements should be developed for each key prescribed burning role (Section 5.2.4). Also refer recommendations 19, 20 and 22;
4. Agencies should consider a collective approach to conducting prescribed burning training and provide staff with the level of support needed to successfully integrate agency training systems (Section 5.3.1);
5. Where agencies find administering an RTO to be onerous, they should consider delivering prescribed burning training under the auspices of another RTO. Potentially, this could comprise a single national RTO (Section 5.3.1);
6. A register of approved contractors, suitable for providing assistance and advice on prescribed burning training and practice to both agencies and other user groups, should be established and maintained (Section 5.3.2);

*Note this recommendation links with the recommendation on contractors in the report on Prescribed Burning National Capability Optimisation sub-project.*

7. The credentialing of experienced prescribed burning practitioners through the AFAC Emergency Management Professionalisation Scheme (EMPS) should be considered (Section 5.3.2);
8. A national program to support agency trainers and practitioners in prescribed burning should be initiated. This could include visiting trainers and experts, and the showcasing of best practice techniques, the findings of research and the latest technology (Section 5.3.3);
9. The Centre of Excellence for Prescribed Burning coordinate a range of programs to assist fire agencies and other user groups build capacity and capability (Section 5.3.3); and

10. While a national training centre could provide increased opportunities for students to undertake practical course work, the agencies are currently not comfortable with this concept. This may change once a national approach to training matures. In the interim, agencies should actively seek and make available opportunities for students to complete their practical course requirements (Section 5.3.3).

## **Section 6 - Recommendations to improve training content**

11. The current split between the units of competency for simple and complex prescribed burns should be retained as this reflects the varied work contexts of the agencies (Section 6.1.1);
12. The current split between the units of competency for planning and conducting prescribed burns should be retained as this gives the agencies the option for delivering training in either or both these contexts (Section 6.2.1);
13. The current units of competency for planning prescribed burns need strengthening to include more detail on designing lighting patterns, in particular more detail on designing lighting patterns for aerial ignition of complex burns (Section 6.2.1);
14. The current units of competency in prescribed burning need strengthening to include the areas of risk identified through the National Burning Project. The associated training materials need amending to include a summarised version of this information (Section 6.2.2);

*Note: the associated training materials were updated recently summarising the risk management material from the National Burning Project.*

15. Agencies requiring more training in risk management processes should consider using the existing units of competency on risk management within the PSTP (Section 6.2.2);
16. Professional development workshops and activities should be conducted in planning and managing strategic prescribed burning programs (Section 6.2.3);
17. Professional development workshops and activities should be conducted in monitoring and evaluating the environmental impact of prescribed burns (Section 6.2.3); and
18. The National Burning Project should take no further action on the training for standard AIIMS roles, aviation roles and for Fire Behaviour Analysts, as this training is being addressed through other processes (Section 6.2.3).

*Note: the National Burning Project has concluded since this report was initially produced, and took no action in these areas as recommended.*

## **Section 7 - Recommendations to improve the competency framework**

19. Agencies should adopt standard role titles and role definitions for key prescribed burning roles (Section 7.2.1). Links with recommendation 22;
20. Agencies should agree on a standard minimum cluster of competencies for each key prescribed burning role (Section 7.2.3). Links with recommendation 22;
21. Adding new pre-requisites or removing current pre-requisites from the units of competency will result in the units being considered 'new' and agencies will need to transfer previously trained people across to the new units. Therefore, to avoid additional administration, the current pre-requisite requirements for the units of competency should remain and no further ones be added (Section 7.2.4);

*Note this position will be reviewed during the formal review of the amended competencies in late 2017 and early 2018.*

22. Skill Sets to formalise titles, responsibilities and competency clusters for key prescribed burning roles should be developed and endorsed within the PSTP (Section 7.3).

#### **Section 8 - Recommendations for other user groups**

23. Skill Sets should be developed for community or local groups undertaking small burns and be endorsed within the PSTP (Section 8.2.1);
24. Other industry training bodies with an interest in prescribed burning should be encouraged to directly adopt the relevant units of competency and training pathways from the PSTP (Section 8.2.2);
25. Tailored training materials and methods should be developed for prescribed burning in the northern Australian context (Section 8.3); and
26. A project on cultural burning practices should be initiated in conjunction with indigenous land councils and groups (Section 8.4).



*Source: Office of Bushfire Risk Management, Western Australia.*

# **1 INTRODUCTION**

## **1.1 Purpose**

The Prescribed Burning Training Competencies and Delivery Review is a sub-project of the National Burning Project and aims to:

- Ensure a suitable, adequate and approved suite of competency standards exist within the Public Safety Training package (PSTP) for the tasks and roles required for prescribed burning for all users; and
- Investigate and recommend the preferred options for the delivery of national training programs to increase the efficiency and effectiveness of current arrangements.

The report has been developed by Ewan Waller and Associates for the Australasian Fire and Emergency Service Authorities Council (AFAC) and the Forest Fire Management Group (FFMG).

## **1.2 Background**

### **1.2.1 AFAC and FFMG**

AFAC is the national council for fire, land management and emergency service authorities in Australia and New Zealand. It represents 33 member agencies, including agencies that comprise permanent personnel, part-time personnel and volunteer personnel. AFAC engages with member agencies through a collaboration model.

AFAC is also involved in event facilitation, professional development and represents the member agencies to influence change in regulations and standards. AFAC exists to support the fire and emergency service industry, working to make communities safer and more resilient.

The FFMG is a sub-group of the Forestry and Forest Products Committee established under the Commonwealth Agriculture Senior Officials Committee and Agriculture Ministers Forum that reports to the Council of Australian Governments (COAG). FFMG comprises the land management agencies from across Australia and New Zealand: principally the forest, parks and reserve land managers. The emphasis of this group is on forest fire management where prescribed burning is an essential element in managing fire fuel loads and maintaining forest ecological health.

### **1.2.2 National Burning Project**

The National Burning Project was jointly commissioned by AFAC and FFMG.

AFAC and FFMG member agencies established the National Burning Project in 2011, with the initial funding provided by the federal government and later the agencies providing internal funding and subsequently additional funding was received from the National Bushfire Mitigation Fund in 2014 to support the delivery of outcomes. The National Burning Project concluded in June 2017 with nearly all of its milestones delivered.

The objective of the National Burning Project was to develop a national approach to the management of prescribed burning in order to reduce bushfire risk to the Australian and New

Zealand communities. The intended national approach is at a landscape scale and balances operational, ecological and community health risks.

The National Burning Project comprised a series of sub-projects that can be combined into an enduring framework that can be progressively enhanced, updated or refreshed. The Centre of Excellence for Prescribed Burning will champion and take forth the work of the National Burning Project.

The Prescribed Burning – National Capability Optimisation sub-project is part of the National Burning Project.

### 1.2.3 National Position on Prescribed Burning

The recommendations in this report relating to the improved delivery of training for prescribed burning are underpinned by the AFAC *National Position on Prescribed Burning* (AFAC 27 October 2016). These principles articulate the nationally agreed principles for the implementation of prescribed burning policies and programs. The principles are:

- Protection of life is the highest consideration;
- Landscape health is linked to fire and fire management;
- Prescribed burning is a risk management tool;
- Engagement with community and business owners;
- Prescribed burning is done in the context of measurable outcomes;
- Informed knowledge of fire in the landscape;
- Capability development;
- Traditional owner use of fire in the landscape is acknowledged;
- An integrated approach is required across land tenures; and
- Prescribed burning is carried out under legislative, policy and planning requirements.

Each agency applies these principles in its prescribed burning program in accordance with its own legal, political, organisational, social, economic and environmental requirements.

Ewan Waller and Associates were asked to consider training '*for the tasks and roles required for prescribed burning for all users*'. Within this report, the stocktake of current training for prescribed burning relates only to the AFAC member agencies, whereas the discussion on future training delivery options and the proposed future competency framework for prescribed burning relates to all users.

## 1.3 Definitions

The definitions are sourced from the *Public Safety Training Package*, including prescribed burning competencies: PUAFIR412, PUAFIR413, PUAFIR511 and PUAFIR513.

**A prescribed burn** is the controlled application of fire under specified environmental conditions to a predetermined area and at the time, intensity and rate of spread required to attain planned resource management objectives.

**A prescribed burn plan** is an approved plan for the conduct of prescribed burning, includes a map identifying the area to be burned and incorporates the specifications and conditions under which the operation is to be conducted.

**A simple prescribed burn** is characterised by low risk, low intensity, small area, low potential impact on assets, completion in one shift and minimal variation of fuel and terrain.

**A complex prescribed burn** is characterised by moderate to high risk, a range of fire intensities, medium to large areas, significant potential impact on assets and involves a variety of fuels and terrain. The burn operation may involve a large number of resources requiring the establishment of a formal management and support structure. It may require several separate ignitions (ground and/or aerial), possibly over several days. It may have a number of high value assets requiring complex protection actions.



*Source: Bushfire and Natural Hazards CRC*

## **2 PRESCRIBED BURNING TRAINING COMPETENCIES AND DELIVERY REVIEW**

### **2.1 Objectives**

The aims of the Prescribed Burning Training Competencies and Delivery Review sub-project are intended to be achieved through the following four deliverables:

1. A review of each AFAC member agency's approach to training for prescribed burning;
2. A discussion paper outlining future options for an approach to nationally structured training delivery;
3. A review of the public safety endorsed units for prescribed burning, with any gaps identified, and preparation of a new framework; and
4. Development of draft competencies to match the new framework.

This report addresses the first three deliverables.

### **2.2 Links to *Prescribed Burning National Capability Optimisation* sub-project**

The Prescribed Burning Training Competencies and Delivery sub-project includes links to all other sub-projects of the National Burning Project. The most substantial linkage is with the Prescribed Burning National Capability Optimisation sub-project, also undertaken by Ewan Waller and Associates, and the two sub-projects were undertaken concurrently.

The objective of the Prescribed Burning National Capability Optimisation sub-project is to develop processes and systems that facilitate greater opportunities for the sharing of prescribed burning resources between agencies and across jurisdictions.

The Prescribed Burning National Capability Optimisation sub-project includes a number of deliverables, including the requirement to establish a cross-border matrix of personnel competencies (job-titles and required skill sets), which relate directly to the information in this report.

### **2.3 Indicative prescribed burning roles**

As part of the Prescribed Burning Capability Optimisation sub-project, Ewan Waller and Associates distributed the following indicative roles and their generic descriptors to agencies. Agencies were asked to identify any variations or additional roles. To ensure consistency between the Prescribed Burning Capability Optimisation and the Training Competencies and Delivery sub-projects, these roles were used for both sub-projects.

As a result of feedback received from the agencies and summarised within this report, these roles may be refined.

**Table 3** Indicative prescribed burning roles

Prescribed Burning Role	Descriptor
<b>Burn Crew Member</b>	The person participating in lighting and conducting prescribed burns under direct supervision.
<b>Burn Crew Leader</b>	The leader of a prescribed burn crew.
<b>Sector Commander</b>	Responsible for the management of all operational aspects and resources allocated to a sector of a prescribed burn.
<b>Burn Manager / Operations Officer - simple burns</b>	Responsible for the management of all operational aspects and resources allocated to a simple prescribed burn, i.e. a burn characterised by low risk, low intensity, small area, low risk to assets, with minimal variation to fuel characteristics and terrain.
<b>Burn Manager / Operations Officer - complex burns</b>	Responsible for the management of all operational aspects and resources allocated to a complex prescribed burn, i.e. a burn characterised by moderate to high risk, a range of fire intensity, medium to large areas, significant potential impact on assets and involving a variety of fuels and terrain.
<b>Burn Planner - simple burns</b>	Responsible for preparation of approved plan that incorporates the specifications and conditions under which a simple prescribed burn is to be conducted, i.e. a burn characterised by low risk, low intensity, small area, low risk to assets, with minimal variation to fuel characteristics and terrain
<b>Burn Planner - complex burns</b>	Responsible for preparation of approved plan that incorporates the specifications and conditions under which a complex prescribed burn is to be conducted, i.e. a burn characterised by moderate to high risk, a range of fire intensity, medium to large areas, significant potential impact on assets and involve a variety of fuels and terrain.
<b>Incendiary Operator</b>	An authorised agency person responsible for the operation, servicing, handling and storage of the aerial incendiary machine and associated consumables for a prescribed burn.
<b>Incendiary Ops Navigator</b>	An authorised agency person responsible for the safe, effective and efficient conduct of aerial incendiary operations for a PB to prescription, including direction of the pilot and aerial incendiary machine operator, and liaison with ground crews.
<b>Meteorologist</b>	A qualified person to provide accurate and timely advice of forecast fire weather to assist in planning and implementation of a prescribed burn.
<b>Fire Behaviour Analyst</b>	A qualified person providing advice on fire behaviour to burn planners and operations personnel to meet prescribed burn objectives.
<b>Environmental Monitoring</b>	A qualified person or team to assist the planning of prescribed burn, prior to implementation, and develop a process to evaluate outcomes.
<b>Community Engagement</b>	The person who facilitates and make recommendations on community engagement for prescribed burn.
<b>Resources Officer</b>	The person responsible for maintaining information about the location and deployment status of people, vehicles and equipment involved in the prescribed burn program.
<b>Logistics Officer</b>	The person responsible for sourcing and maintaining the human and physical resources to support the prescribed burning program.
<b>Incident Controller (prescribed burns)</b>	An authorised agency person responsible for leading the prescribed burns operations program and approving the lighting of burns within a defined geographic area. The program may include a number of prescribed burns being conducted concurrently and the coordination of a large number of resources.

<b>State / Regional/ Agency Strategist</b>	The Person responsible at the for analysing data and recommending long term (10+ years) fuel management strategies (using prescribed burning) at the state/jurisdictional scale, cognisant of state / agency policies and objectives and economic, environmental and social requirements.
<b>State Burn Coordinator</b>	The person responsible for prioritising and monitoring the delivery of prescribed burn operations at jurisdictional level. Compile reports and prepare briefings.
<b>Burn Outcome Evaluation &amp; Monitoring</b>	The person who assesses the outcomes of a prescribed burn program or a burn.

## 2.4 Technical Reference Group (TRG)

In 2016, each state, territory and New Zealand nominated suitable agency staff for a Technical Reference Group (TRG) for this Prescribed Burning Training Competencies and Delivery Review sub-project. TRG members are listed in Appendix B to this document.

Each TRG member was the key point of contact for Ewan Waller and Associates to collect information about current agency prescribed burning training programs within the respective jurisdiction. TRG members were asked to represent the interests of constituent groups within their jurisdiction, communicate project issues to agencies and seek agency direction where required.

## 2.5 Methodology

### 2.5.1 Overview

The methodology for the sub-project was:

- An initial meeting was held with the TRG on 24 November 2016;
- Ewan Waller and Associates distributed and collated a survey relating to the content and delivery of prescribed burning training in agencies;
- Ewan Waller and Associates visited each state and territory to meet with the TRG representatives and other agency representatives to discuss survey results;
- Ewan Waller and Associates prepared a draft report on the results of the survey and visits;
- The TRG held a workshop on the 28 and 29 March 2017 to discuss the draft report and to agree on recommendations; and
- Ewan Waller and Associates prepared a final draft report which was circulated to agencies for review.

### 2.5.2 Survey tools

Ewan Waller and Associates developed and distributed the following survey tools to TRG members:

- A data survey which collected details of the content and delivery of training for individual prescribed burning roles; and
- A questionnaire addressing more general aspects of the content and delivery of training for prescribed burning.

The content of these survey tools is listed in Appendix A.

TRG members were asked to distribute the surveys to other agencies with an interest in the outcomes of the sub-project and to collect and return completed surveys prior to the visit of Ewan Waller and Associates.

However, not all surveys were returned by the date of the visit, generally due to the timing of the sub-project, which coincided with fire season preparedness and response activity in many jurisdictions. Additionally, many of the surveys were incomplete or the questions were not able to be answered by the agencies. Ewan Waller and Associates subsequently contacted agency representatives directly to validate the information collected.

### **2.5.3 Agency visits**

Ewan Waller and Associates visited the states and territories according to the following schedule. Each visit covered both projects (Prescribed Burning National Capability Optimisation sub-project and the Prescribed Burning Training Competencies and Delivery Review sub-project), with half a day allocated to each.

The schedule was as follows:

- 5 December 2016 – Victoria;
- 6 December 2016 – Australian Capital Territory;
- 7 December 2016 – New South Wales;
- 9 December 2016 – Tasmania;
- 15 December 2016 – South Australia;
- 10 January 2017 – Western Australia;
- 12 January 2017 – Northern Territory;
- 17 January 2017 – New Zealand (meeting held in Victoria); and
- 18 January 2017 – Queensland.

### **3 THE TRAINING CONTENT FOR PRESCRIBED BURNING ROLES**

This Section collates the results of the agency survey and visits, and summarises:

- The content of the training currently delivered by AFAC member agencies;
- The extent of use of nationally accredited competencies; and
- The extent of use of non-accredited training.

Note, for various reasons, not all agencies provided information for the survey and the results are limited to the information submitted and clarified by the agencies during the survey and review process.

#### **3.1 Summary**

All agencies used accredited training for prescribed burning roles and identified a cluster of competencies for each role. However, the combination of competencies was different for each agency. There were some common units of competency for each role but each agency then selected further units of competency they considered prepared their personnel to face the risks of working within the specific agency context.

The agencies did not distinguish between the operational management arrangements for prescribed burning and for fire suppression. They used the structure and principles of the Australasian Inter-service Incident Management System (AIIMS) or an AIIMS-like system for managing both contexts. The training for crew member, crew leader and sector commander roles were the same for both fire suppression and for prescribed burning, and the normal training for AIIMS roles applied to most other roles.

In general, agencies likened managing a simple burn to managing a level 1 incident (under AIIMS) and managing a complex burn (or multiple burns) to managing a level 2 or 3 incident (under AIIMS). In accordance with the principles of AIIMS, agencies applied a flexible approach to the delegation of support functions. Small simple burns were generally managed on-scene by an incident controller (or burn manager) who also performed the operations, planning, logistics and public information functions as required. Multiple or more complex burns were generally managed by an incident controller located in an incident control centre (or other facility) supported where necessary by additional personnel performing planning, logistic and public information functions and sub-functions.

Some agencies conducted only simple burns, while other agencies considered all burns to be complex. Agencies responded to the survey in accordance with their perception about the complexity of the burns they conducted and how and where these should be managed. The divergences in burn management arrangements led to diverse opinion about whether support functions such as logistics and resources were required.

However, regardless of whether the burns conducted were simple or complex, agencies agreed that the person on scene lighting the prescribed burn needed to be appropriately skilled and a number of agencies trained this person using the nationally endorsed units of competency. Other agencies

included this training within their normal firefighter training – this was especially the case where prescribed burning, rather than fire response, was the main fire activity undertaken by the agency.

Agencies were in similar agreement about the burn planner role, recognising that a key difference between prescribed burning and fire suppression is the opportunity for planners to plan ahead and fully investigate and mitigate risks.

Agencies expressed a growing interest in training people for support functions such as predictive services (including Fire Behaviour Analysts), environmental and values management, and community engagement. However, these functions were developing for prescribed burning and agencies were not unified in how these functions should be managed or their associated training requirements. The exception was the meteorologist function, which was outsourced by almost every agency.

Each state applied a different approach to aerial ignition roles, which was surprising given there is a national approach to training for aviation-related roles, but the survey respondents may not have been the main people in the agencies responsible for aviation.

Agencies generally did not train personnel for state and regional strategic and coordination roles, rather fire managers holding substantive positions within the agency were accountable for these functions. Other agencies did not have these roles at all, as accountability for prescribed burn was divested locally.

Post burn monitoring was considered an essential yet evolving area and agencies were divided about whether responsibility lay with the burn planner, burn manager or with the accountable manager.

## 3.2 Interpretation of tables

The survey results have been sorted according to the indicative prescribed burning roles and each Section is prefaced by information that places these roles within the context of the agencies.

For each role, a table lists the units of competency required by each agency as well as the competencies acquired on the pathway to the role.

Within the following tables:

- ✓ indicates this unit of competency is required for the role
- \* Indicates this unit of competency is on the training pathway for the role
- C Indicates this unit of competency is required for COMPLEX burns (note that this automatically also applies to SIMPLE burns)
- E Denotes the agency does not award (or intend to award) this competency but considers its training to be of an equivalent standard.

The units of competency for each role are listed in alphabetical order according to their identifying code. These are followed by any non-accredited agency-specific training.

Ewan Waller and Associates has recorded the information provided by agencies and has not investigated:

- The equivalence between units of competency;
- The content of each unit of competency; and
- Whether the units of competency are currently registered.

Nearly all agencies had additional requirements for each role, including the following, but these were not collated for this project:

- Fitness requirements;
- Defined periods of experience in pre-requisite roles; and
- Skills maintenance requirements, such as having to practice the role several times a year.

### 3.3 Agency training requirements for each role

#### 3.3.1 Burn Crew Member

Ewan Waller and Associates suggested this role was:

*‘The person participating in lighting and conducting prescribed burns under direct supervision.’*

**Table 4** Context of the burn crew member role within the responding agencies

Juris.	Agen.	Alternative name	Comment
TAS	PWS	Forest Firefighter	Same role as for wildfire firefighter
TAS	FT	Forest Firefighter	Same role as for wildfire firefighter
TAS	TFS	Pay Point 4	Same role as for wildfire firefighter
NSW	NSW RFS	Crew Member	Same role as for wildfire firefighter
NSW	OEHS	Crew Member	Same role as for wildfire firefighter
NSW	FCNSW	Forest Firefighter	Same role as for wildfire firefighter
VIC	DELWP	General fire fighter	Same role as for wildfire firefighter
VIC	CFA	Burn Crew	Same role as for wildfire firefighter
ACT	PCS	Crew Member	Same role as for wildfire firefighter
QLD	HQP	Crew Member	Same role as for wildfire firefighter
QLD	QPWS	Fire Crew	Same role as for wildfire firefighter
NT	FRS	Fire Fighter or Crew	Same role as for wildfire firefighter
WA	DPaW	Fire Crew Member	Same role as for wildfire firefighter
WA	DFES	Firefighter	Same role as for wildfire firefighter
SA	DEWNR	Firefighter	Grade 1 - Firefighter Same role as for wildfire firefighter

All agencies had the Crew Member role and considered it to be the same for both wildfire and prescribed burns. The training content for the Crew Member role in each responding agency is indicated in the table on the following page.

**Table 5** Training content for crew member role

	TAS	TAS	TAS	NSW	NSW	NSW	VIC	VIC	ACT	QLD	QLD	NT	WA	SA
	PWS	FT	TFS	RFS	OEH	FCNSW	DELWP	CFA	PCS	HQP	QPWS	FRS	DPaW	DEWNR
<b>N/A (not applicable) or NNC (no national competencies)</b>														
<b>Agency endorsement (Y/N, TBD = to be developed)</b>	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
SPICOT2239A Trim and cross cut felled trees									✓					
SPICOT2237A Maintain chainsaw									✓					
SISODRV302A Drive and recover 4WD vehicle					✓									
PUAVEH001B Drive vehicles under operational conditions														✓
PUATEA004A Work effectively in a Public Safety Organisation				✓										
PUATEA002 Work autonomously								✓						
PUATEA001B Work in a team	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
PUAOPE014A Navigate to an incident		✓	✓											
PUAOPE013A or PUAOPE002B Operate communications systems and equipment	✓			✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
PUAOPE003B Navigate in rural and urban environments									✓		✓			
PUAOHS002B Maintain safety at an incident scene		✓	✓		✓		✓	✓	✓					✓
PUAOHS001C Follow defined OHS policies and procedures	✓			✓	✓									✓
PUALAW001B Protect and preserve incident scene					✓				✓					
PUAFIR319 Take local weather observations	✓													
PUAFIR309B Operate pumps	✓						✓	✓	✓					
PUAFIR303B Suppress Wildfire	✓	✓	✓									✓		
PUAFIR216 Undertake hover-exit operations from helicopter	✓													
PUAFIR215 Prevent injury	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>PUAFIR213 Assist with prescribed burning</b>	✓					✓							✓	
PUAFIR209B Work Safely Around Aircraft	✓	✓	✓		✓				✓					
PUAFIR204B Respond to Wildfire	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PUAEQU001B Prepare, maintain and test response equipment	✓			✓	✓	✓	✓		✓	✓	✓		✓	✓
PUAEMR027 Assess operational risk	✓													
PUAEMR026 Treat Operational Risk	✓													
PUAEME001A - Provide emergency care									✓					
PUACOM001C Communicate in the workplace		✓	✓		✓				✓				✓	✓
PUA20713 Cert II in Public Safety (Fire fighting Operations)	✓													
HLTAID005 Provide First Aid in Remote Situations (for remote area fire fighters)	✓													
HLTAID003 Provide First Aid or equivalent	✓				✓				✓					
FWPCOT3202 Navigate in remote or trackless areas	✓													
FPIFHM2208A Fell trees manual basic									✓					
FPICOT3260 Operate a 4X4	✓													
FPICOT3260 Recover 4X4	✓													
FPICOT2239A Trim and cross cut felled trees		✓	✓											
FPICOT2234A Drive and operate a 4WD									✓					
CPPFES2005A Demonstrate first attack firefighting equipment.														✓
AHCWRK203 Operate in isolated and remote situations	✓													
AHCNAR307 Read and interpret maps	✓													
Operate tanker (VIC CFA)								✓						

The table indicates the agencies vary in the training they deliver for the role. Most agencies authorised their personnel for the role.

All agencies deliver the following units of competency:

- *PUATEA001B Work in a team;*
- *PUAFIR215 Prevent injury; and*
- *PUAFIR204B Respond to Wildfire.*

Most agencies deliver training (in some form) relating to the following themes:

- Occupational health and safety;

- Operation of communications equipment;
- Driving (but not necessarily four-wheel driving); and
- Navigation to an incident (but not necessarily topographic map-reading).

The survey indicates only a few agencies train Crew Members in the following subject areas:

- Working around aircraft (e.g. Puafir209b work safely around aircraft);
- Chainsaw use (e.g. Fpifhm2208a fell trees manual basic, fpicot2239a trim and cross cut felled trees, spicot2239a trim and cross cut felled trees etc.);
- Pump operation (although this may be covered in other units of competency);
- Remote area firefighting; and
- First aid.

Only three agencies (FCNSW, TAS PWS and WA DPaW) deliver *Puafir213 Assist with Prescribed Burning* to all Crew Members, although other agencies indicated they cover a similar content in their core firefighter training.

Some agencies indicated additional non-accredited content for their training, but this did not relate to prescribed burning, for example road accident response or building firefighting systems, and the units of competency relating to these areas are not included in the table.

Ewan Waller and Associates concludes that, in addition to shared core units of competency, each agency has selected the training for Crew Member role according to the legislative, geographic and operational context of the agency and its associated risk profile. The inconsistency between agencies indicates that, if Crew Members are deployed to joint agency prescribed burns (either intra or interstate), the agency managing the burns should identify the risks of the work environment, the required skills to address these risks and check that the incoming resources have the required training.

### **3.3.2 Burn Crew Leader**

Ewan Waller and Associates suggested this role was:

*‘The leader of a prescribed burn crew.’*

**Table 6** Context of the burn crew leader role within the responding agencies

<b>Juris.</b>	<b>Agen.</b>	<b>Alternative name</b>	<b>Comment</b>
<b>TAS</b>	<b>PWS</b>	Advanced Fire Fighter	Same role as for wildfire crew leader
<b>TAS</b>	<b>FT</b>	N/A	Doesn't have this role
<b>TAS</b>	<b>TFS</b>	Senior Fire Fighter	Same role as for wildfire crew leader
<b>NSW</b>	<b>NSW RFS</b>	Crew Leader	Same role as for wildfire crew leader
<b>NSW</b>	<b>OEH</b>	Crew Leader	Same role as for wildfire crew leader
<b>NSW</b>	<b>FCNSW</b>	Crew Leader	Same role as for wildfire crew leader
<b>VIC</b>	<b>DELWP</b>	Crew Leader	Same role as for wildfire crew leader
<b>VIC</b>	<b>CFA</b>	-	Same role as for wildfire crew leader
<b>ACT</b>	<b>PCS</b>	Crew Leader	Same role as for wildfire crew leader
<b>QLD</b>	<b>HQP</b>	Crew Leader	Same role as for wildfire crew leader
<b>QLD</b>	<b>QPWS</b>	Fire Crew Leader	Same role as for wildfire crew leader
<b>NT</b>	<b>FRS</b>	Station Officer or Captain	
<b>WA</b>	<b>DPaW</b>	Burn Crew Leader or Overseer	Same role as for wildfire crew leader
<b>WA</b>	<b>DFES</b>	Crew Leader	Same role as for wildfire crew leader
<b>SA</b>	<b>DEWNR</b>	Crew Leader	Grade 2 – Crew Leader Same role as for wildfire crew leader

All agencies (with the exception of TAS FT) had the Crew Leader role equivalent and considered the role to be the same for both wildfire and prescribed burns.

The training content for the Crew Leader role is shown in the table on the following page. All agencies required their Crew Member units of competency as a pre-requisite for their Crew Leaders and the table shows each of these units as an asterisk (\*).

**Table 7** Training content for crew leader role

	TAS	TAS	TAS	NSW	NSW	NSW	VIC	VIC	ACT	QLD	QLD	NT	WA	SA
	PWS	FT	TFS	RFS	OEH	FCNSW	DELWP	CFA	PCS	HQP	QPWS	FRS	DPaW	DEWNR
<b>N/A (not applicable) or NNC (no national competencies)</b>		N/A												
<b>Agency endorsement (Y/N, TBD = to be developed)</b>	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	TBD	Y	Y	Y
TAEDL301A Provide work skill instruction	✓		✓											
TAEASS301B Contribute to Assessment	✓													
SPICOT2239A Trim and cross cut felled trees									*					
SPICOT2237A Maintain chainsaw									*					
SISODRV302A Drive and recover 4WD vehicle					*									
PUAVEH001B Drive vehicles under operational conditions														*
PUATEA004A Work effectively in a Public Safety Organisation				*										
PUATEA003B Lead manage and develop teams												✓		
PUATEA002B Work Autonomously	✓			*	✓	*	✓	✓	✓	✓			✓	
PUATAE001B Work in a team	*		*	*	*	*	*	*		*	*		*	*
PUAOPE020A Lead a crew	✓		✓		✓	✓					✓		✓	
PUAOPE015 Conduct briefings and debriefings					✓	✓	✓		✓	✓		✓		
PUAOPE014A Navigate to an incident			*	*	✓								✓	✓
PUAOPE013A or PUAOPE002B Operate communications systems and equipment	*			*	*	*	*	*	*	*	*		*	*
PUAOPE012A Control a Level 1 incident				✓	✓	✓						✓		
PUAOPE003B Navigate in urban and rural areas						*			*	✓	*			
PUAOPE001A Supervise response (Fire Specific)				✓		✓			✓	✓				
PUAOSH002B Maintain safety at an incident scene			*	*	*	*	*	*	*		✓		✓	*
PUAOSH001C Follow defined OHS policies and procedures	*			*	*									*
PUALAW001B Protect and preserve incident scene					*	✓	✓		*	✓				✓
PUAFIR319 Take local weather observations	*													
<b>PUAFIR413 Develop simple prescribed burn plans</b>												✓		
<b>PUAFIR412 Conduct simple prescribed burns</b>												✓		
PUAFIR309B Operate pumps	*			*		*	*	*	*					
PUAFIR303B Suppress Wildfire	*		*	✓	✓	✓	✓		✓	✓	✓	*	✓	✓
PUAFIR216 Undertake hover-exit operations from helicopter	*													
PUAFIR215 Prevent injury	*		*	*	*	*	*	*	*	*	*	*	*	*
<b>PUAFIR213 Assist with prescribed burning</b>	*					*							*	
PUAFIR209B Work Safely Around Aircraft	*		*		*	✓			*					
PUAFIR204B Respond to Wildfire	*		*	*	*	*	*	*	*	*	*	*	*	*
PUAEQU001B Prepare, maintain and test response equipment	*			*	*	*	*		*	*	*		*	*
PUAEMR027 Assess operational risk	*													
PUAEMR026 Treat Operational Risk	*													
PUAEMR022 Establish content and develop risk assessment												✓		
PUAEME001A - Provide emergency care									*					
PUACOM006B Plan and conduct public awareness program			✓											
PUACOM001C Communicate in the workplace			*		*	*	✓		*	✓	✓		*	*
PUA20713 Cert II in Public Safety (Fire fighting Operations)	✓													
HLTAID005 Provide First Aid in Remote Situations (for remote area fire fighters)	*													
HLTAID003 Provide First Aid or equivalent	*				*									✓
FWPCOT3202 Navigate in remote or trackless areas	*													
FPFHM2208A Fell trees manual basic									*					
FPICOT3260 Operate a 4X4	*													
FPICOT2360 Recover 4X4	*													
FPICOT2234A Drive and operate a 4WD									*					
FPICOT 2239A Trim and cross cut felled trees			*		✓									
FPICOR4201 OR FPQCOR2205 Monitor Safety, Health & Environmental Policies and Procedures OR Follow OHS policies and procedures										✓				
CPPFES2005A Demonstrate first attack firefighting equipment.														*
AHCWRK203 Operate in isolated and remote situations	*													
AHCNAR307 Read and interpret maps	*													
22202VIC Course in AIMS or equivalent	✓				✓				✓		E			
Lighting patterns course (ACT PCS)									✓					
Operate tanker (VIC CFA)								*						
CFA 065 Crew Leadership (VIC CFA)								✓						
Workplace health and safety risk management for managers (NSW OEH)					✓									

The table indicates variation in the training delivered for the role. Most agencies authorized their personnel for the role.

Including the units delivered for Crew Member, all Crew Leaders hold the following units of competency:

- *PUAFIR303B Suppress Wildfire;*
- *PUATAE001B Work in a Team;*
- *PUAFIR215 Prevent Injury; and*
- *PUAFIR204B Respond to Wildfire.*

There is evidence all agencies train Crew Leaders in supervision but are not consistent in the unit of competency used for this training.

Additionally, all Crew Leaders have some form of training in:

- Occupational health and safety;
- Operation of communications equipment;
- Driving (but not necessarily four-wheel driving); and
- Navigation to an incident (but not necessarily topographic map-reading).

Four agencies train Crew Leaders to work around aircraft, so this competency remains discretionary. Chainsaw use, first aid and four-wheel driving remain similarly discretionary.

Similar to Crew Members, agencies should check that incoming Crew Leaders for joint operations have the required training to address the risks of the specific work environment prior to deployment.

### 3.3.3 Sector Commander

Ewan Waller and Associates suggested this role was:

*‘Responsible for the management of all operational aspects and resources allocated to a sector of a prescribed burn.’*

**Table 8** Context of sector commander role within the responding agencies is

Juris.	Agen.	Alternative name	Comment
TAS	PWS	-	Same as Sector Commander for wildfire
TAS	FT	-	
TAS	TFS	Leading Fire Fighter / Station Officer	ALL TFS station officers and leading firefighters are trained to sector commander level and are able to develop, conduct and assess simple prescribed burns
NSW	NSW RFS	-	Same Crew Leader, also the same as Sector Commander for wildfire
NSW	OEH	Sector/Division Commander	-
NSW	FCNSW	Group Leader	
VIC	DELWP	-	Same as Sector Commander for wildfire
VIC	CFA	-	Same as Sector Commander for wildfire
ACT	PCS	Division Commander	Same as Sector Commander or Operations Officer Level 1
QLD	HQP	-	Also have training for Division Commander
QLD	QPWS	-	QPWS Type 1 control training applies to Sector Commander/Level 1 Incident Controller roles. Type 1 Planned Burn training (PUAFIR412 Conduct simple prescribed burns and PUAFIR413 Develop simple prescribed burn plans) is desirable/not mandatory
NT	FRS	Station Officer or Watch Commander	
WA	DPaW	-	
WA	DFES	-	
SA	DEWNR	-	Grade 3 – Strike team Leader or Sector Commander Level 2 (Simple) or Grade 4 – Sector Commander Level 3 (Complex)

All agencies have the Sector Commander role and it is the same for both wildfire and prescribed burns. However, there is some divergence with titles and several agencies identify the Sector Commander role to be the equivalent of a Strike Team Leader, Division Commander and/or an Operations Officer. Career fire agencies refer to a title in their rank structure and which is authorised to perform a number of roles. In essence these agencies indicated that the training for these roles is the same, although there may be additional experience requirements for more senior roles.

The training content for the Sector Commander role is shown in the following table. All agencies required Sector Commanders to have both Crew Member and Crew Leader units of competency (as specified by the individual agency) as pre-requisites and these units are included in the table.

**Table 9** Training content for sector commander role

	TAS	TAS	TAS	NSW	NSW	NSW	VIC	VIC	ACT	QLD	QLD	NT	WA	SA
	PWS	FT	TFS	RFS	OEH	FCNSW	DELWP	CFA	PWS	HQP	QPWS	FRS	DPaW	DEWNR
<b>N/A (not applicable) or NNC (no national competencies)</b>														
<b>Agency endorsement (Y/N, TBD = to be developed)</b>	Y	N	Y	N	Y	Y	Y	Y	Y	Y	TBD		Y	Y
VU20875 - Work within the Australasian Inter-Service Incident Management System														✓
TAEDEL301A Provide work skill instruction	*		*											
TAEASS301B Contribute to assessment	*													
SPICOT2239A Trim and cross cut felled trees									*					
SPICOT2237A Maintain chainsaw									*					
SISODRV302A Drive and recover 4WD vehicle					*									
PUAVEH001B Drive vehicles under operational conditions														*
PUATEA004A Work effectively in a Public Safety Organisation				*										
PUATEA003B Lead manage and develop teams			✓									*		
PUATEA002B Work Autonomously	*			*	*	*		*	*	*	✓		*	✓
PUATAE001B Work in a team	*		*	*	*	*	*	*	*	*	*		*	*
PUAOPE23A Manage operations at a Level 2 incident						✓								
PUAOPE020A Lead a crew	*		*		*						*		*	✓
PUAOPE018A Control a level 2 incident						✓								
PUAOPE016A Manage a multi-team sector	✓		✓		✓	✓			✓		✓		✓	✓
PUAOPE015A or PUAOPE004B Conduct briefings and debriefings	✓		✓	*	*	*	*	✓	*	*	✓	*	✓	✓
PUAOPE014A Navigate to an incident			*	*	*								*	*
PUAOPE013A or PUAOPE002B Operate communications systems and equipment	*			*	*	*	*		*	*	*		*	*
PUAOPE012A Control a Level 1 incident	✓		✓	✓	*	*			*		✓	*	✓	✓
PUAOPE005 Manage a multi team response								✓		✓				
PUAOPE003B Navigate in urban or rural areas						*			*	*	*			
PUAOPE001A Supervise response (fire specific)				✓		*	*		*	*				
PUAOHS002B Maintain safety at an incident scene			*	*	*	*	*	*	*		*		*	
PUAOHS001C Follow defined OHS policies and procedures	*			*	*									*
PUALAW001B Protect and preserve incident scene					*	*	*		*	*				*
<b>PUAFIR413 Develop simple prescribed burn plans</b>			✓								✓	*		
<b>PUAFIR412 Conduct simple prescribed burns</b>			✓								✓	*		
PUAFIR319 Take local weather observations	*										E			
PUAFIR309B Operate pumps	*			*		*	*	*	*					
PUAFIR303B Suppress wildfire	*		*	✓	*	*	*	*	*	*	*	*	*	*
PUAFIR216 Undertake hover-exit operations from helicopter	*													
PUAFIR215 Prevent injury	*		*	*	*	*	*	*	*	*	*	*	*	*
<b>PUAFIR213 Assist with prescribed burning</b>	*				*	*			*		*		*	
PUAFIR209B Work Safely Around Aircraft	*		*		*	*			*					
PUAFIR204B Respond to Wildfire	*		*	*	*	*	*	*	*	*	*	*	*	*
PUAEQU001B Prepare, maintain and test response equipment	*			*	*	*	*		*	*	*		*	*
PUAEMR027 Assess operational risk	*													
PUAEMR026 Treat Operational Risk	*													
PUAEMR022 Establish content and develop risk assessment			✓									*		
PUAEME001A - Provide emergency care									*					
PUACOM012B Liaise with media at a local level			✓											
PUACOM006B Plan and conduct public awareness program			*											
PUACOM001C Communicate in the workplace			*		*	*	*		*	*	*		*	*
PUA20713 Cert II in Public Safety (Fire fighting Operations)	✓													
HLTAID005 Provide First Aid in Remote Situations (for remote area fire fighters)	*													
HLTAID003 Provide First Aid or equivalent	*								*					*
FWPCOT3202 Navigate in remote or trackless areas	*													
PFIFHM2208A Fell trees manual basic									*					
FPICOT3260 Operate a 4X4	*													
FPICOT2360 Recover 4X4	*													
FPICOT2234A Operate a 4WD									*					
FPICOT 2239A Trim and cross cut felled trees			*											
FPICOR4201 OR FPQCOR2205 Monitor Safety, Health & Environmental Policies and Procedures OR Follow OHS policies and procedures										*				
CPPFES2005A Demonstrate first attack firefighting equipment.														*
BSBMGT401A Show leadership in the workplace			✓											
AHCWRK203 Operate in isolated and remote situations	*													
AHCNAR307 Read and interpret maps	*													
22202VIC Course in AIIMS or equivalent	*		✓	✓	*				✓	✓	*E			✓
Lighting patterns course (ACT PCS)									✓					
Overall fuel hazard assessment (QLD QPWS)											✓			
Fire weather 1 (QLD QPWS)											✓			
CFA011 Strike Team Leader (VIC CFA)								✓						
CFA065 Crew Leadership (VIC CFA)								*						
CFA090 Sector Commander (VIC CFA)								✓						

Including the units delivered for Crew Member and Crew Leader, all Sector Commanders hold the following units of competency:

- *PUATAE001B Work in a Team;*
- *PUAFIR215 Prevent Injury;*
- *PUAFIR204B Respond to Wildfire; and*
- *PUAFIR303B Suppress Wildfire.*

A number of agencies require either some or all of the following competencies and, through discussion, it was evident that agencies had sought a competency relating to the supervisory responsibility of a Sector Commander:

- *PUAOPE016A Manage a Multi-Team Sector;*
- *PUAOPE015A or PUAOPE004B Conduct Briefings and Debriefings;*
- *PUAOPE012A Control a Level 1 Incident;*
- *PUAOPE001A Supervise Response (fire specific); and*
- *22202VIC Course in Australasian Inter-service Incident Management System (AIIMS) or some form of equivalent training.*

Additionally, all Sector Commanders have some form of training in:

- Occupational health and safety;
- Operation of communications equipment;
- Driving (but not necessarily four-wheel driving); and
- Navigation to an incident (but not necessarily topographic map-reading).

Five agencies train Sector Commanders to work around aircraft, so this competency is now more common, although remains discretionary. Chainsaw use, first aid and four-wheel driving remain similarly discretionary.

TAS TFS, TAS PWS and QLD QPWS are the only agencies that train in the specific nationally endorsed prescribed burning competencies at Sector Commander level.

### 3.3.4 Burn Manager/Operations Officer (simple burn)

Ewan Waller and Associates suggested this role was:

*‘Responsible for the management of all operational aspects and resources allocated to a simple prescribed burn, i.e. a burn characterised by low risk, low intensity, small area, low risk to assets, with minimal variation to fuel characteristics and terrain.’*

**Table 10** Context of the burn manager/operations officer (simple burn) role within the responding agencies

Juris.	Agen.	Alternative name	Comment
TAS	PWS	Burn Incident Controller - simple	Note this role is the same as Incident Controller (simple)
TAS	FT	Operations Officer	
TAS	TFS	Leading Fire Fighter / Station Officer	Training is the same as for Sector Commander  ALL TFS station officers and leading firefighters are trained to sector commander level and are able to develop, conduct and assess simple prescribed burns.
NSW	NSW RFS	Incident Controller	This role is the same as Incident Controller – simple burns
NSW	OEH	Incident Controller	All burns are complex.
NSW	FCNSW	-	Crew leader role
VIC	DELWP	N/A	All burns are complex.
VIC	CFA	Burn Controller CR1 (Complexity Rating 1)	As for Incident Controller level 1 plus PUAFIR412 Conduct simple prescribed burns
ACT	PCS	Operations Officer	As for Operations Officer Level 1
QLD	HQP	Planned Burn Supervisor	Most burns are generally simple  Requires Division Commander training
QLD	QPWS	Operations Officer	QPWS does not distinguish between wildfire and prescribed burns for this role  Operations function not delegated by Incident Controller on simple prescribed burns. Managed the same as a Level 1 fire
NT	FRS	Watch Commander or District Officer	
WA	DPaW	Operations Officer	
WA	DFES	Operations Officer	
SA	DEWNR	Prescribed Burn Operations Officer	Note - pile burn could be conducted by Crew Leader

The agencies used different approaches for this role and, even within the same state.

The differences related to whether the most senior person responsible for the prescribed burn was on-scene or located in a facility. Where the most senior person was on-scene, this role was equivalent to the Incident Controller role for the prescribed burn. Where the most senior person was located in an office, the role on-scene was equivalent to the role of an Operations Officer for the burn.

In essence, the differences parallel the approaches used by agencies to manage level 1 (or simple) emergency incidents using AIIMS. The differences relate to whether the incident controller locates at a forward control point (performing both the operations and control functions) or whether control has been escalated (commonly called 'transferred') to an incident controller located in an incident control centre or equivalent facility, having delegated the responsibility for operations to an on-scene operations officer. Both approaches are valid applications of the principles of AIIMS and demonstrate the flexibility of the AIIMS system.

Some agencies developed this theme further and likened managing a simple burn to managing a level 1 incident and managing a complex burn (or multiple burns) to managing a level 2 or 3 emergency incident.

Note that some agencies specified Crew Leader as the pre-requisite role. This is part reflected the context of the burns being conducted by the agency, for example small local roadside or private property burns conducted by local volunteers.

Other agencies specified Sector Commander as the pre-requisite role and this was where the agency believed all burns were complex or had the potential to be complex. NSW OEH and VIC DELWP said they believed all burns should be managed as complex burns.

The training content for the Burn Manager/Operations Officer (simple burn) role is shown in the table on the following page. This includes the pre-requisite competencies specified by each agency.



*Source: Fire and Rescue Service, Northern Territory*

**Table 11** Training content for burn manager/operations (simple burns) officer role

	TAS	TAS	TAS	NSW	NSW	NSW	VIC	VIC	ACT	QLD	QLD	NT	WA	SA
	PWS	FT	TFS	RFS	OEH	FCNSW	DELWP	CFA	PCS	HQP	QPWS	FRS	DPaW	DENWR
<b>N/A (not applicable) or NNC (no national competencies)</b>							N/A				N/A			
<b>Agency endorsement (Y/N, TBD = to be developed)</b>	Y	N	Y	Y	Y	Y		Y	Y	Y		Y	N	Y
VU20875 - Work within the Australasian Inter-Service Incident Management System ...														*
TAEDEL301A Provide work skill instruction	*		*											
TAEASS301B Contribute to Assessment	*													
SPICOT2239A Trim and cross cut felled trees									*					
SPICOT2237A Maintain chainsaw									*					
SISODRV302A Drive and recover 4WD vehicle					*									
PUAVEH001B Drive vehicles under operational conditions														*
PUATEA004A Work effectively in a Public Safety Organisation				*										
PUATEA003B Lead manage and develop teams			*									*		
PUATEA002B Work autonomously	*			*	*	*		*	*	*			*	*
PUATAE001B Work in a team	*		*	*	*	*		*	*				*	*
PUAOPE020A Lead a crew	*		*	*	*	*							*	*
PUAOPE016A Manage a multi-team sector	*		*	*	*	*							*	*
PUAOPE015A or PUAOPE004B Conduct briefings and debriefings	*		*	*	*	*		*	*	*		*	*	*
PUAOPE014A Navigate to an incident			*	*	*								*	*
PUAOPE013A or PUAOPE002B Operate communications systems and equipment				*	*	*		*	*	*			*	*
PUAOPE012A Control a L1 incident	*		*	*	*	*						*	*	*
PUAOPE007 Command multi-agency emergency response										*				
PUAOPE005 Manage multi team response								*	*	*				
PUAOPE001A Supervise response (Fire Specific)				*		*			*	*				
PUAOPE0003 Navigate in urban and rural areas						*			*	*				
PUAOHS001C Follow defined OHS policies and procedures	*			*	*									*
PUAOHS 002B Maintain safety at an incident scene			*		*	*		*	*				*	*
PUALAW001B Protect and preserve incident scene					*	*			*	*				*
<b>PUAFIR513 Develop complex prescribed burn plans</b>														✓
<b>PUAFIR511 Conduct complex prescribed burns</b>					✓									✓
<b>PUAFIR413 Develop simple prescribed burn plans</b>	✓	✓	*					✓				*		
<b>PUAFIR412 Conduct simple prescribed burns</b>	✓	✓	*	✓				✓				*	✓	
<b>PUAFIR407 Conduct prescribed burn (superceded)</b>										✓				
<b>PUAFIR406 Develop prescribed burn plan (superceded)</b>										✓				
PUAFIR319 Take local weather observations	*													
PUAFIR309B Operate pumps	*					*		*	*					
PUAFIR303B Suppress Wildfire	*		*	*	*	*		*	*	*			*	*
PUAFIR216 Undertake hover-exit operations from helicopter	*													
PUAFIR215 Prevent injury	*		*	*	*	*		*	*	*		*	*	*
<b>PUAFIR213 Assist with prescribed burning</b>	*					*							*	
PUAFIR209B Work Safely Around Aircraft	*		*		*	*			*					
PUAFIR204B Respond to Wildfire	*		*	*	*	*		*	*	*		*	*	*
PUAEQU001B Prepare, maintain and test response equipment	*			*	*	*			*	*			*	*
PUAEMR027 Assess operational risk	*													
PUAEMR026 Treat Operational Risk	*													
PUAEMR022 Establish content and develop risk assessment			*									*		
PUAEME001A - Provide emergency care									*					
PUACOM012B Liaise with media at a local level			*											
PUACOM006B Plan and conduct public awareness program			*											
PUACOM001C Communicate in the workplace			*		*	*			*				*	*
HLTAID005 Provide First Aid in Remote Situations (for remote area fire fighters)	*													
HLTAID003 Provide First Aid or equivalent	*													*
FWPCOT3202 Navigate in remote or trackless areas	*													
FPFHM2208A Fell trees manual basic									*					
FPICOT3260 Operate a 4X4	*													
FPICOT2360 Recover 4X4	*													
FPICOT2234A Operate a 4WD									*					
FPICOT 2239A Trim and cross cut felled trees			*		E									
FPICOR4201 OR FPQCOR2205 Monitor Safety, Health & Environmental Policies and Procedures OR Follow OHS policies and procedures										*				
CPPFES2005A Demonstrate first attack firefighting equipment.														*
BSBMGT401A Show leadership in the workplace			*											
AHCWRK203 Operate in isolated and remote situations	*													
AHCNAR307 Read and interpret maps	*													
22202VIC Course in AIIMS or equivalent	*		*	✓	*				*	*				*
Lighting patterns course (ACT PCS)									✓					
Overall fuel hazard assessment (QLD QPWS)														
Fire weather 1 (QLD QPWS)														

Of the fourteen agencies responding to the survey, ten require nationally endorsed prescribed burning units of competency for this role. In summary:

- WA DPaW and NSW RFS require *PUAFIR412 Conduct Simple Prescribed Burns*;
- All TAS agencies (PWS, FT and TFS), VIC CFA and NT FRS believe the person who conducted the burn should preferably have also planned it, or at least understand how it was planned;
- For the same reasons, QLD HQP requires Burn Managers/Operations Officer to hold two similar, though superseded, units of competency;
- Because they believe all burns have the same risks and therefore the potential to be complex, NSW OEH and SA DENWR require all Burn Managers/Operations Officers to have *PUAFIR511 Conduct Complex Prescribed Burns*. Training for these roles also covers *PUAFIR513 Develop Complex Prescribed Burn Plans*, but full competence in this unit is not required; and
- NSW FCNSW saw no distinction between this role and the Operations Officer role (Crew Leader role).

In QLD QPWS and NSW RFS, all operational functions for simple burns are handled by the on-scene Incident Controller, who does not delegate the operations officer function.

### 3.3.5 Burn Manager/Operations Officer (complex burn)

Ewan Waller and Associates suggested this role was:

*‘Responsible for the management of all operational aspects and resources allocated to a complex prescribed burn, i.e. a burn characterised by moderate to high risk, a range of fire intensity, medium to large areas, significant potential impact on assets and involve a variety of fuels and terrain.’*

**Table 12** Context of the burn manager/operations officer (complex burn) role within the responding agencies

Juris.	Agen.	Alternative name	Comment
TAS	PWS	Burn Incident Controller – Complex	Note this role is the same as Incident Controller (complex)  Equivalent to a Level 2 or 3 Incident Controller  Requires at least three years’ experience in a fire ground management role level or above in fire suppression situations i.e. Div. Cmdr., level 2/3 Incident Controller, Operations Officer, Planning Officer and/or Safety Advisor.
TAS	FT	-	Any Forest Officer can undertake this role
TAS	TFS	Level 2 or 3 Incident Controller	Equivalent to a Level 2 or 3 Incident Controller  TFS has numerous people (from Station officers, Senior Station Officers and District Officers) that could conduct complex burns and have qualifications that enable them to complete this task.

<b>NSW</b>	<b>NSW RFS</b>	Incident Controller	This role is the same as Incident Controller – complex burns
<b>NSW</b>	<b>OEH</b>	Incident Controller	All burns are complex
<b>NSW</b>	<b>FCNSW</b>	-	Group Leader (sector commander) role
<b>VIC</b>	<b>DELWP</b>	Burns Officer in Charge (BOIC)	All burns are complex
<b>VIC</b>	<b>CFA</b>	Burn Controller CR2/3 (Complexity Rating 2/3)	As for Incident Controller level 2/3 plus PUA FIR511 – Conduct complex prescribed burns
<b>ACT</b>	<b>PCS</b>	Operations Officer	As for Operations Officer level 2/3
<b>QLD</b>	<b>HQP</b>	N/A	Most burns are general simple
<b>QLD</b>	<b>QPWS</b>	Operations Officer	QPWS does not distinguish between wildfire and prescribed burns for this role.  Although for complex fires (red flag) operational procedures dictate that experienced staff are selected to perform IMT roles. The same minimum training as Sector Commander/level 1 Control (Type 1) applies. For complex prescribed burns (red flag burns) operational procedures mandate experienced staff are selected to perform incident management roles
<b>NT</b>	<b>FRS</b>	Watch Commander or District Officer	
<b>WA</b>	<b>DPaW</b>	Operations Officer	
<b>WA</b>	<b>DFES</b>	Operations Officer	
<b>SA</b>	<b>DEWNR</b>	Prescribed Burn Operations Officer	Same role as for simple burns (with exception of pile burns)

The agencies further diverged regarding this role. Many equated this to either a Level 2/3 Incident Controller or a Level 2/3 Operations Officer.

The training content for the Burn Manager / Operations Officer (complex burns) role is shown in the following table. This includes the pre-requisite competencies specified by each agency.

**Table 13** Training content for burn manager/operations (complex burns) officer role

	TAS	TAS	TAS	NSW	NSW	NSW	VIC	VIC	ACT	QLD	QLD	NT	WA	SA
	PWS	FT	TFS	RFS	OEH	FCNSW	DELWP	CFA	PCS	HQP	QPWS	FRS	DPaW	DEWNR
<b>N/A (not applicable) or NNC (no national competencies)</b>							NNC					N/A		
<b>Agency endorsement (Y/N, TBD = to be developed)</b>	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	TBD		N	Y
VU20875 - Work within the Australasian Inter-Service Incident Management System ...														*
TAEDEL301A Provide work skill instruction	*		*											
TAEASS301B Contribute to Assessment	*													
SPICOT2239A Trim and cross cut felled trees									*					
SPICOT2237A Maintain chainsaw									*					
SISODRV302A Drive and recover 4WD vehicle					*									
PUAVEH001B Drive vehicles under operational conditions														*
PUATEA004A Work effectively in a Public Safety Organisation				*										
PUATEA003B Lead manage and develop teams			*											
PUATEA002B Work autonomously	*		*	*	*	*		*	*	*	*		*	*
PUATAE001B Work in a team	*		*	*	*	*		*	*	*	*		*	*
PUAOPE23A Manage operations at a Level 2 incident						*			*					
PUAOPE020A Lead a crew	*		*	*	*	*					*		*	*
PUAOPE018A Control a level 2 incident			✓		*	*								
PUAOPE016A Manage a multi-team sector	*		*		*	*					*		*	*
PUAOPE015A or PUAOPE004B Conduct briefings and debriefings	*		*		*	*		*	*	*	*		*	*
PUAOPE014A Navigate to an incident			*	*	*	*							*	*
PUAOPE013A or PUAOPE002 Operate communications systems and equipment				*	*	*		*	*	*	*		*	*
PUAOPE012A Control a Level 1 incident	*		*	*	*	*					*		*	*
PUAOPE007B Command multi-agency emergency response			✓							*				
PUAOPE005 Manage a multi team response								*	*	*				
PUAOPE003 Navigate in urban and rural areas						*			*	*	*			
PUAOPE001A Supervise response (Fire Specific)				*		*			*	*				
PUAOHS002B Maintain safety at an incident scene			*		*	*		*	*		*		*	*
PUAOHS001C Follow defined OHS policies and procedures	*			*	*	*								*
PUALAW001B Protect and preserve incident scene					*	*			*	*				*
<b>PUAFIR513 Develop complex prescribed burn plans</b>	✓						E							*
<b>PUAFIR511 Conduct complex prescribed burns</b>	✓				✓		E	✓					✓	*
<b>PUAFIR413 Develop simple prescribed burn plans</b>	*		*					*			*			
<b>PUAFIR412 Conduct simple prescribed burns</b>	*		*	✓				*			*			
<b>PUAFIR407 Conduct prescribed burn (superceded)</b>										*				
<b>PUAFIR406 Develop prescribed burn plan (superceded)</b>										*				
PUAFIR319 Take local weather observations	*										*E			
PUAFIR309B Operate pumps	*			*		*		*	*					
PUAFIR303B Suppress Wildfire	*	*	*	*	*	*		*	*	*	*		*	*
PUAFIR216 Undertake hover-exit operations from helicopter	*													
PUAFIR215 Prevent injury	*	*	*	*	*	*		*	*	*	*		*	*
<b>PUAFIR213 Assist with prescribed burning</b>	*					*							*	
PUAFIR209B Work Safely Around Aircraft	*	*	*	*	*	*		*	*					
PUAFIR204B Respond to Wildfire	*	*	*	*	*	*		*	*	*	*		*	*
PUAEQU001B Prepare, maintain and test response equipment	*			*	*	*		*	*	*	*		*	*
PUAEMR027 Assess operational risk	*													
PUAEMR026 Treat Operational Risk	*													
PUAEMR022 Establish content and develop risk assessment			*											
PUAEME001A - Provide emergency care									*					
PUACOM012B Liaise with media at a local level			*											
PUACOM006B Plan and conduct public awareness program			*											
PUACOM001C Communicate in the workplace			*		*	*		*	*	*	*		*	*
HLTAID005 Provide First Aid in Remote Situations (for remote area fire fighters)	*													
HLTAID003 Provide First Aid or equivalent	*							*						*
FWPCOT3202 Navigate in remote or trackless areas	*													
FPIFHM2208A Fell trees manual basic									*					
FPICOT3260 Operate a 4X4	*													
FPICOT2360 Recover 4X4	*													
FPICOT2234A Operate a 4WD									*					
FPICOT 2239A Trim and cross cut felled trees			*											
FPICOR4201 OR FPQCOR2205 Monitor Safety, Health & Environmental Policies and Procedures OR Follow OHS policies and procedures										*				
CPPFES2005A Demonstrate first attack firefighting equipment.														*
BSBMGT401A Show leadership in the workplace			*											
AHCWRK203 Operate in isolated and remote situations	*													
AHCNAR307 Read and interpret maps	*													
22202VIC Course in AIIMS or equivalent	*		*	*	*	*			*	*	*E			*
Lighting patterns course (ACT PCS)									✓					
CFA025 Fire weather (VIC CFA)								✓						
Fire Weather 1 (QLD QPWS)											*			
Overall fuel hazard assessment (QLD QPWS)											*			

There was little equivalence between agencies for this role.

Agencies used either PUA FIR511 Conduct Complex Prescribed Burns (six agencies), PUA FIR412 Conduct Simple Prescribed Burns (four agencies), superseded units (one agency), equivalence training (one agency) or no specific additional training for this role (two agencies).

### 3.3.6 Incident Controller (prescribed burns)

Ewan Waller and Associates suggested this role was:

*‘An authorised agency person responsible for leading all resources delivering the prescribed burns operations program within a defined geographic area. The program may include a number of prescribed burns being conducted concurrently and the coordination of a large number of resources.’*

**Table 14** Context of the incident controller role within the responding agencies

Juris.	Agen.	Alternative name	Comment
TAS	PWS	Burn Incident Controller - Complex	This is the same role as listed under Burn Manager/Operations Officer – complex burns. The skillset is the same as for a Level 2 or 3 incident controller.
		Burn Incident Controller – Simple	On scene. Note that this is the same role as listed below under Burn Manager/Operations Officer – simple burns. The skillset is the same as for Level 1 Incident Controller
TAS	FT	Incident Controller	On scene
TAS	TFS	Level 2 or 3 Incident Controller	All station officer and LFF have been signed off to control a Level 1 incident as Incident Controller. Senior station officers are assessed to control a level 2 incident and require mentoring to be signed off as a Level 3 Incident controller
		Level 1 Incident Controller	On scene Training is the same as for Sector Commander. This equates to Level 1 Incident Controller ALL TFS station officers and leading firefighters are trained to sector commander level and are able to develop, conduct and assess simple prescribed burns.
NSW	NSW RFS	Incident Controller (complex)	This role is the same as listed under Burn Manager/Operations Officer – complex burns
		Incident Controller (simple)	On scene This role is the same as listed under Burn Manager/Operations Officer – simple burns
NSW	OEH	Burn Incident Controller	
NSW	FCNSW	-	
VIC	DELWP	Burns Controller	In Incident Control Centre managing multiple burns Same as Incident Controller for wildfire
VIC	CFA	Rostered Duty Officer	In Incident Control Centre managing multiple burns Same as Incident Controller Level 2 or 3 for wildfire
ACT	PCS	Incident Controller	Same as for wildfire Incident Controller
QLD	HVP	Incident Controller	HQP is working towards using the AFAC Certification Scheme for this role and will add additional requirements

			for the position once agreement is reached with other agencies.
<b>QLD</b>	<b>QPWS</b>	Incident Controller	QPWS does not distinguish between wildfire and prescribed burning for the Incident Controller role. Minimum training standards = same training as Sector Commander/level 1 Control (Type 1) for more complex burns controller selected commiserate to levels of operational experience.
<b>NT</b>	<b>FRS</b>	Incident Controller	
<b>WA</b>	<b>DPaW</b>	Burn Controller	Performed by District Duty Officer. Same as a Level2 Incident Controller
<b>WA</b>	<b>DFES</b>	Burn Controller	
<b>SA</b>	<b>DEWNR</b>	Prescribed Burn Incident Controller	

The information for this role relates directly to the information for Burn Manager/Operations Officer (discussed above). In summary, the difference relates to whether the incident controller for the prescribed burn is located on-scene or in a facility. Where the incident controller is on-scene, they also perform the role of Burn Manager/Operations Officer. Where the incident controller is located in a facility, they have delegated the Burn Manager/Operations Officer role to a person on-scene.

Some agencies have developed this theme further and likened managing a simple burn to managing a level 1 incident and managing a complex burn (or multiple burns) to managing a level 2 or 3 emergency incident. This means that the Incident Controller for the simple burn is usually on scene, while the Incident Controller for a more complex burn or multiple burns is usually in a facility and supported by personnel to whom they have delegated support functions.

Both approaches are valid applications of the principles of AIIMS and demonstrate the increase in the number of functions delegated as the management requirements of the situation escalate.

The competencies required by each agency for the incident controller (prescribed burns) are detailed in the table on the following page.

**Table 15** Training content for burn incident controller role

	TAS	TAS	TAS	NSW	NSW	NSW	VIC	VIC	ACT	QLD	QLD	NT	WA	SA
	PWS	FT	TFS	RFS	OEH	FCNSW	DELWP	CFA	PCS	HQP	QPWS	FRS	DPaW	DEWNR
<b>N/A (not applicable) or NNC (no national competencies)</b>							NNC							
<b>Agency endorsement (Y/N, TBD = to be developed)</b>	Y	N	Y	Y	Y	Y	Y		Y	Y	TBD	Y	N	Y
VU20875 - Work within the Australasian Inter-Service Incident Management System ...														*
TAEDEL301A Provide work skill instruction	*		*											
TAEASS301B Contribute to Assessment	*													
SPICOT2239A Trim and cross cut felled trees									*					
SPICOT2237A Maintain chainsaw									*					
SISODRV302A Drive and recover 4WD vehicle					*									
PUAVEH001B Drive vehicles under operational conditions														*
PUATEA004A Work effectively in a Public Safety Organisation				*										
PUATEA003B Lead manage and develop teams			*						✓		✓	*		
PUATEA002B Work autonomously	*			*	*	*			*	*	*		*	*
PUATAE001B Work in a team	*		*	*	*	*			*	*	*		*	*
PUAOPE18A Control a Level 2 Incident			C			C							✓	
PUAOPE023A Manage operations at a Level 2 incident						C				*				
PUAOPE020A Lead a crew	*		*		*	*					*		*	
PUAOPE016A Manage a multi-team sector	*		*		*	C					*		*	*
PUAOPE015A or PUAOPE004B Conduct briefings and debriefings	*		*		*	*			*	*	✓	*	*	*
PUAOPE014A Navigate to an incident			*	*	*								*	*
PUAOPE013A or PUAOPE002 Operate communications systems and equipment				*	*	*			*	*	*		*	*
PUAOPE012A Control a Level 1 incident	*		*	*	*	*					*	*	*	*
PUAOPE007B Command multi-agency emergency response			*							*				
PUAOPE005 Manage multi team response									*	*				
PUAOPE003B Navigate in urban and rural areas						*			*	*	*			
PUAOPE001A Supervise response (Fire Specific)				*					*	*				
PUAOHS002B Maintain safety at an incident scene			*		*	*			*		*		*	*
PUAOHS001C Follow defined OHS policies and procedures	*			*	*									*
PUALAW001B Protect and preserve incident scene					*	*			*	*				*
<b>PUAFIR513 Develop complex prescribed burn plans</b>	C													✓
<b>PUAFIR511 Conduct complex prescribed burns</b>	C													✓
<b>PUAFIR413 Develop simple prescribed burn plans</b>	✓		✓								*	*		
<b>PUAFIR412 Conduct simple prescribed burns</b>	✓		✓	✓	✓						*	*		
PUAFIR319 Take local weather observations	*										*E			
PUAFIR309B Operate pumps	*			*		*			*					
PUAFIR303B Suppress Wildfire	*		*	*	*	*			*	*	*	*	*	*
PUAFIR216 Undertake hover-exit operations from helicopter	*													
PUAFIR215 Prevent injury	*		*	*	*	*			*	*	*	*	*	*
<b>PUAFIR213 Assist with prescribed burning</b>	*					*							*	
PUAFIR209B Work Safely Around Aircraft	*		*		*	*			*					
PUAFIR204B Respond to Wildfire	*		*	*	*	*			*	*	*	*	*	*
PUAEQU001B Prepare, maintain and test response equipment	*			*	*	*			*	*	*		*	*
PUAEMR027 Assess operational risk	*													
PUAEMR026 Treat Operational Risk	*													
PUAEMR022 Establish content and develop risk assessment			*									*		
PUAEME001A - Provide emergency care									*					
PUACOM012B Liaise with media at a local level			*											
PUACOM006B Plan and conduct public awareness program			*											
PUACOM001C Communicate in the workplace			*		*	*			*	*	*		*	*
HLTAID005 Provide First Aid in Remote Situations (for remote area fire fighters)	*													
HLTAID003 Provide First Aid or equivalent	*													*
FWPCOT3202 Navigate in remote or trackless areas	*													
FPFHM2208A Fell trees manual basic									*					
FPICOT3260 Operate a 4X4	*													
FPICOT2360 Recover 4X4	*													
FPICOT2234A Operate a 4WD									*					
FPICOT 2239A Trim and cross cut felled trees			*											
FPICOR4201 OR FPQCOR2205 Monitor Safety, Health & Environmental Policies and Procedures OR Follow OHS policies and procedures										✓				
CPPFES2005A Demonstrate first attack firefighting equipment.														*
BSBMGT401A Show leadership in the workplace			*											
AHCWRK203 Operate in isolated and remote situations	*													
AHCNAR307 Read and interpret maps	*													
22202VIC Course in AIIMS or equivalent	*		✓	✓	*				*	*	*E			*
Lighting patterns course (ACT PCS)									✓					
Overall fuel hazard assessment (QLD QPWS)											*			
Fire weather 1 (QLD QPWS)											*			

Most agencies see a direct equivalence between the Incident Controller role for both wildfire (and, in some cases, for other emergencies as well) and prescribed burning.

Only six agencies require specific prescribed burning competencies for the role:

### 3.3.7 Burn Planner

The survey investigated the Burn Planner role for each of simple and complex burns. However, because only a couple of agencies distinguished the roles, the results for both parts of the survey have been combined.

Ewan Waller and Associates suggests a Burn Planner (simple burns) is:

*‘Responsible for preparation of approved plan that incorporates the specifications and conditions under which a simple prescribed burn is to be conducted, i.e. a burn characterised by low risk, low intensity, small area, low risk to assets, with minimal variation to fuel characteristics and terrain.’*

**Table 16** Context of the burn planner (simple burns) role within the responding agencies

Juris.	Agen.	Alternative name	Comment
TAS	PWS	Burn Plan Author - Simple	Sector Commander and L1 IC Regional employees are assigned burn plans by the Regional Fire Management Officers commensurate with their competence and training. RFOO responsible for proposed burn site preparation.
TAS	FT	-	Any Forest Officer can undertake this role
TAS	TFS	Sector Commander	All Station Officers and Leading firefighters can perform this role (training as per Sector Commander)
NSW	NSW RFS	Prescribed Burn Planner	Same role for both simple and complex burns
NSW	OEH	N/A	Only do complex burns
NSW	FCNSW	Burn Planner	
VIC	DELWP	N/A	Only do complex burns
VIC	CFA	Burn Planner CR2/3	Burn Planner Level 2/3 plus PUA FIR513 – Develop complex prescribed burn plans
ACT	PCS	Burn Planner	
QLD	HQP	N/A	Don't use the term Burn Planner. Planning is done by operational personnel with fire responsibility e.g. relevant regional fire manager
QLD	QPWS	N/A	QPWS does not define roles specific to burn plan development. Burn Plans are developed locally although subjected to regional oversight prior to approval.
NT	FRS	Volunteer Captains or crew leaders	
WA	DPaW	Prescribing Officer	
WA	DFES	Prescribing Officer	
SA	DENWR	Prescribed Burn Operations Officer	

Ewan Waller and Associates suggests a Burn Planner (complex burns) is:

*‘Responsible for preparation of approved plan that incorporates the specifications and conditions under which a complex prescribed burn is to be conducted, i.e. a burn characterised by moderate to high risk, a range of fire intensity, medium to large areas, significant potential impact on assets and involve a variety of fuels and terrain.’*

**Table 17** Context of the burn planner (complex burns) role within the responding agencies

Juris.	Agen.	Alternative name	Comment
TAS	PWS	Burn Plan Author - Complex	Requires experience in a level 2/3 fire ground management role i.e. L2/L3 Incident Controller, Operations Officer, Planning Officer or Safety Advisor.  Regional employees are assigned burn plans by the Regional Fire Management Officers commensurate with their competence and training. RFOO responsible for proposed burn site preparation.
TAS	FT	-	
TAS	TFS	-	This may not be a firefighter but a planner from outside TFS who has the skillsets required to achieve this task. The Senior station officers have skill sets in this are in relation to planning but not specific to this field of prescribed burning.
NSW	NSW RFS	Prescribed Burn Planner	Same role for both simple and complex burns
NSW	OEHS	Prescribed Burn Planner	Only do complex burns
NSW	FCNSW	Burn Planner	
VIC	DELWP	Fire Operations Plan Planner Fuel Treatment Planner Burn Planners Burn OIC	Only do complex burns
VIC	CFA	Burn Planner CR2/3	Incident Controller Level 1 plus PUA413 – Develop simple prescribed burn plans
ACT	PCS	Burn Planner	
QLD	HQP	N/A	Don't use the term Burn Planner. Planning is done by operational personnel with fire responsibility e.g. relevant regional fire manager
QLD	QPWS	N/A	QPWS does not define roles specific to burn plan development. Burn Plans are developed locally although subjected to regional oversight prior to approval. Although for complex fires (red flag) a higher degree of oversight and scrutiny is applied by regional management prior to approval.
NT	FRS	N/A	
WA	DPaW	Prescribing Officer	
WA	DFES	Prescribing Officer	
SA	DEWNR	Prescribed Burn Operations Officer	

The competencies required by each agency for the burn planner role (for simple and complex burns) are detailed in the table below.

**Table 18** Training content for the burn planner role

	TAS	TAS	TAS	NSW	NSW	NSW	VIC	VIC	ACT	QLD	QLD	NT	WA	SA
	PWS	FT	TFS	RFS	OEH	FCNSW	DELWP	CFA	PCS	HQP	QPWS	FRS	DPaW	DENWR
<b>N/A (not applicable) or NNC (no national competencies)</b>							NNC			N/A	N/A			
<b>Agency endorsement (Y/N, TBD = to be developed)</b>		N	Y	Y	Y	Y		Y	Y			Y	N	Y
VU20875 - Work within the Australasian Inter-Service Incident Management System ..														*
TAEDEL301A Provide work skill instruction	*		*											
TAEASS301B Contribute to assessment	*													
SISODRV302A Drive and recover 4WD vehicle					*									
PUAVEH001B Drive vehicles under operational conditions														*
PUATEA004A Work effectively in a Public Safety Organisation				*										
PUATEA003B Lead manage and develop teams			✓									*		
PUATEA002B Work Autonomously	*			*	*	*		*					*	*
PUATAE001B Work in a team	*		*	*	*	*		*					*	*
PUAOP020A Lead a crew	*		*		*	*							*	*
PUAOP016A Manage a multi-team sector	✓		✓										*	*
PUAOP015A or PUAOP004B Conduct briefings and debriefings	✓		✓		*	*		*				*	*	*
PUAOP014A Navigate to an incident			*	*	*								*	*
PUAOP013A or PUAOP002B Operate communications systems and equipment				*	*	*		*					*	*
PUAOP012A Control a L1 incident	✓		✓	*	*	*						*	*	*
PUAOP001A Supervise response (Fire Specific)				*		*								*
PUAOP0003B Navigate in urban and rural environments														
PUAOP002B Maintain safety at an incident scene			*			*		*					*	
PUAOP001C Follow defined OHS policies and procedures	*			*	*									
PUAOP002B Maintain safety at an incident scene			*		*	*							*	
PUALAW001B Protect and preserve incident scene					*	*								*
<b>PUAFIR513 Develop complex prescribed burn plans</b>	C		C	C	C	C		C					C	C
<b>PUAFIR511 Conduct complex prescribed burns</b>	C													C
<b>PUAFIR413 Develop simple prescribed burn plans</b>			✓					✓				*	✓	
<b>PUAFIR412 Conduct simple prescribed burns</b>			✓									*		
PUAFIR319 Take local weather observations	*													
PUAFIR309B Operate pumps	*			*		*		*						
PUAFIR303B Suppress Wildfire	*		*	*	*	*		*				*	*	*
PUAFIR216 Undertake hover-exit operations from helicopter	*													
PUAFIR215 Prevent injury	*		*		*	*		*				*	*	*
<b>PUAFIR213 Assist with prescribed burning</b>	*					*							*	
PUAFIR209B Work Safely Around Aircraft	*		*		*	*								
PUAFIR204B Respond to Wildfire	*		*	*	*	*		*				*		*
PUAEQU001B Prepare, maintain and test response equipment	*			*	*	*							*	*
PUAEMR027 Assess operational risk	*													
PUAEMR026 Treat Operational Risk	*													
PUAEMR022 Establish content and develop risk assessment			✓									*		
PUACOM012B Liaise with media at a local level			✓											
PUACOM006B Plan and conduct public awareness program			*											
PUACOM001C Communicate in the workplace			*		*	*							*	*
Overall fuel hazard training														
HLTAID005 Provide First Aid in Remote Situations (for remote area fire fighters)	*													
HLTAID003 Provide First Aid	*													*
FWPCOT3202 Navigate in remote or trackless areas	*													
FPICOT3260 Operate a 4X4	*													
FPICOT3260 Recover 4X4	*													
FPICOT 2239A Trim and cross cut felled trees			*											
CPPFES2005A Demonstrate first attack firefighting equipment.														*
BSBMGT401A Show leadership in the workplace			✓											
AHCWRK203 Operate in isolated and remote situations	*													
AHCNAR307 Read and interpret maps	*													
22202VIC Course in AIIMS or equivalent	*		✓		*									*
Requires experience in a level 2/3 fire ground management role i.e. L2/L3 Incident Controller, Operations Officer, Planning Officer or Safety Advisor.	*													
Overall fuel hazard assessment (QLD QPWS)														
Fire weather 1 (QLD QPWS)														

Agencies had different pathways to this role. However, regardless of pathways, all responding agencies required the relevant units of competency for either a simple or a complex prescribed burn as appropriate.

### 3.3.8 Resources Officer

Ewan Waller and Associates suggested this role was:

*‘The person responsible for maintaining information about the location and deployment status of people, vehicles and equipment involved in the prescribed burn program.’*

**Table 19** Context of the resource officer role within the responding agencies

Juris.	Agen.	Alternative name	Comment
TAS	PWS	RFOO, Fire Duty Officer (Planned Burn Coordinator)	Tools developed to support the resource officer, however no training course has been developed.
TAS	FT	Resources Officer	
TAS	TFS	-	All Station Officers and Leading firefighters can perform this role (training as per Sector Commander)
NSW	NSW RFS	FireCom	
NSW	OEH	Resources Officer	Same as AIIM role
NSW	FCNSW	-	
VIC	DELWP	Resources Officer	
VIC	CFA	Planned Burn Resource Coordinator (CEC)	
ACT	PCS	Resources Officer	
QLD	HQP	N/A	This subdivision of AIIMS roles not required for burns
QLD	QPWS	Resources Officer	QPWS does not train staff for specific Incident Management Team (IMT) roles. The Incident Controller will determine if the incident (burn) is of sufficient complexity requiring this role within IMT.
NT	FRS	Station Officer Hazard Abatement	
WA	DPaW	N/A	Performed by Operations Officer
WA	DFES	Resource Officer	
SA	DEWNR	Fire Resource Officer	Role may be performed by Duty Officer or State Duty Officer

The information for this role provided one of the earliest indications that, while some agencies used the AIIMS structure to manage prescribed burns, other agencies used an AIIMS-like structure, with a mixture of substantive positions and AIIMS roles.

Whether an agency delegated the Resources Officer role depended upon the scale of the burning operations and whether the burns were managed on scene (Resources Officer not required) or from an office (where a Resources Officer might manage the resources deployed to a large burn or to multiple burns). Even in some cases where the burns were managed by an Incident Controller located in an office, the scale of operations were often such that delegation of the resources function was not required.

The competencies required by each agency for the Resources Officer role are detailed in the following table.

**Table 20** Training content for the resource officer role

	TAS	TAS	TAS	NSW	NSW	NSW	VIC	VIC	ACT	QLD	QLD	NT	WA	SA
	PWS	FT	TFS	RFS	OEH	FCNSW	DELWP	CFA	PCS	HQP	QPWS	FRS	DPaW	DENWR
N/A (not applicable) or NNC (no national competencies)	NNC	NNC		N/A	N/A		NNC	NNC	NNC	NNC	N/A		N/A	
Agency endorsement (Y/N, TBD = to be developed)	Y	N	Y			N	Y	Y		Y		Y		Y
Station Officer and Leading FireFighter training			✓									✓		

Agencies stated that they trained and endorsed people for the role but that this was not accredited training. TAS TFS identified this as one of the roles that could be performed by Station Officers and Leading Firefighters.

### 3.3.9 Fire Behaviour Analyst (FBAN)

Ewan Waller and Associates suggested this role was:

*‘A qualified person providing advice on fire behaviour to burn planners and operations personnel to meet prescribed burn objectives’*

**Table 21** Context of the fire behaviour analyst role within the responding agencies

Juris.	Agen.	Alternative name	Comment
TAS	PWS	FBaN	Role usually undertaken by Regional Fire Management Officers during planned burn operation.
TAS	FT	-	
TAS	TFS	-	Managed by State FBaN group
NSW	NSW RFS	FBAN	
NSW	OEH	FBAN	
NSW	FCNSW	-	
VIC	DELWP	-	FBAN are at the state and regional levels, assisting with multiple burns
VIC	CFA	-	
ACT	PCS	FBAN	Every burn has an FBAN
QLD	HQP	N/A	Role is outsourced (QFES?)
QLD	QPWS	N/A	QPWS does not have a defined role specific to FBAN, rather selected staff receive this level of training as a knowledge enhancement.
NT	FRS	N/A	
WA	DPaW	N/A	Performed by Prescribing Officer (Burn Planner)
WA	DFES	N/A	Role performed by DFES Environmental Branch
SA	DEWNR	-	

Overall the agencies didn't have a lot to say about this role. There were a number of options:

- ACT PCS deploys an FBAN to every burn;
- Some states have one agency that provides other agencies in the state with FBAN services;
- Some agencies (e.g. VIC DELWP) have FBAN at the state and regional levels, assisting with multiple burns;

- A number of agencies considered the role to be part of the Burn Planner role and not required (and therefore not delegated) as a separate role for burns; and
- Some agencies didn't use this function at all.

The competencies required by each agency for the FBAN role is detailed in the following table. Note that several agencies are still to provide information for this role.

**Table 22** Training content for the fire behaviour analyst role

	TAS	TA	TAS	NS	NS	NSW	VIC	VIC	ACT	QLD	QLD	NT	WA	SA
	PWS	FT	TFS	RFS	OEH	FCNSW	DELWP	CFA	PCS	HQP	QPWS	FRS	DPaW	DEWNR
<b>N/A (not applicable) or NNC (no national competencies)</b>							NNC			N/A	NNC	N/	N/A	
<b>Agency endorsement (Y/N, TBD = to be developed)</b>	Y	N	Y	Y	Y	Y	Y	Y	Y					Y
PUAOPE015A or PUAOPE004B Conduct briefings and debriefings				✓	✓						✓			
PUAFIR512 Develop and analyse the behaviour and suppression options for a Level 2 wildfire				✓	✓	✓		✓			E			
PUAFIR502B Develop incident control strategy					✓	✓								
PUAFIR401B Obtain incident intelligence														✓
PUAFIR319. Take local weather observations											E			✓
TFS177 Fire behaviour analysis (? - not found)			✓											
AIIMS for IMT				✓	✓									
Burn Planner (ACT PCS)									✓		✓			
Fire Weather 1 and 2 (QLD QPWS and NSW OEH)					✓			✓						✓
Situation Officer (WA DEWNR and NSW OEH)					✓									✓
Intermediate bushfire behaviour (VIC CFA)								*						
Crew leader					✓	*		*						
Mapping skills (Emap) (VIC CFA)								✓						
Overall fuel hazard assessment (QLD QPWS)											✓			

Most agencies mentioned that personnel attended courses for the role, conducted by subject matter experts, but these were not accredited. For most agencies, the pre-requisite competencies for these course were also not detailed.

One unit of competency appeared to be specific to the role (*TFS 177 Fire Behaviour Analysis*) but this looked to be a TAS TFS enterprise unit.

### 3.3.10 Environmental Monitoring

Ewan Waller and Associates suggested this role was:

*'A qualified person or team to assist the planning of prescribed burn, prior to implementation, and develop a process to evaluate outcomes.'*

**Table 23** Context of the environment monitoring role within the responding agencies

<b>Juris.</b>	<b>Agen.</b>	<b>Alternative name</b>	<b>Comment</b>
<b>TAS</b>	<b>PWS</b>	Planning Officer (PO)	Pathway to PO via the Operations stream Requires Conservation and Land Management qualification &/or Diploma Regional Fire Management Officers undertake the Reserve Activity Assessment process
<b>TAS</b>	<b>For</b>	Planners	Any Forest Officer can undertake this role
<b>TAS</b>	<b>FT</b>		Doesn't have this role
<b>NSW</b>	<b>NSW RFS</b>	Certificate Issuing Officer or Environmental Officer	
<b>NSW</b>	<b>OEH</b>	N/A	
<b>NSW</b>	<b>FCNSW</b>	-	
<b>VIC</b>	<b>DELWP</b>	Monitoring Team	
<b>VIC</b>	<b>CFA</b>	Bio-diversity Advisor	
<b>ACT</b>	<b>PCS</b>	N/A	Role is performed by Burn Planner
<b>QLD</b>	<b>HQP</b>	N/A	Responsibility for PB implementation and strategy is responsibility of Regional Managers and Fire Protection
<b>QLD</b>	<b>QPWS</b>	N/A	QPWS does define a role for these functions. Environmental / ecological assessment skills and knowledge are incorporating in QPWS fire management training
<b>NT</b>	<b>FRS</b>	N/A	
<b>WA</b>	<b>DPaW</b>	N/A	Role performed by Prescribing Officer (Burn Planner) in association with others
<b>WA</b>	<b>DFES</b>	N/A	Role performed by DFES Environmental Branch
<b>SA</b>	<b>DEWNR</b>	Environment Assessment Officer	

Agencies varied considerably in their approach to the Environmental Management role:

- Some agencies saw the role as part of the responsibility of fire managers in the agency;
- Some agencies saw the role as the responsibility of a substantive position in the agency, for which qualified professionals were recruited;
- Some agencies provided this service as part of centralized service; and
- Some agencies saw this role as a function of a planning officer and did not require the delegation of the function for prescribed burns.

The responses provided by each agency for training for the Environmental Management role are detailed in the following table.

**Table 24** Training content for the environmental monitoring role

	TAS	TAS	TAS	NSW	NSW	NSW	VIC	VIC	ACT	QLD	QLD	NT	WA	SA
	PWS	FT	TFS	RFS	OEH	FCNSW	DELWP	CFA	PCS	HQP	QPWS	FRS	DPaW	DENWR
N/A (not applicable) or NNC (no national competencies)			N/A	NNC	N/A	N/A	N/A	N/A	N/A	N/A	NNC	N/A	N/A	
Agency endorsement (Y/N, TBD = to be developed)	Y	N		Y										Y
non- accredited course (80% agency specific)											✓			

It appears most agencies do not provide specific training for this role. QLD QPWS provides training but states that it is 80% agency specific, as it relates to state specific ecosystems and environmental monitoring processes (QPWS environmental health check).

### 3.3.11 Meteorologist

Ewan Waller and Associates suggested this role was:

*‘A qualified person to provide accurate and timely advice of forecast fire weather to assist in planning and implementation of a prescribed burn.’*

**Table 23** Context of the meteorologist role within the responding agencies

Juris.	Agen.	Alternative name	Comment
TAS	PWS	N/A	Role is outsourced to the Bureau of Meteorology
TAS	FT	N/A	
TAS	TFS	N/A	Does not have this role
NSW	NSW RFS	NSW RFS Meteorologist	Professional role (higher education qualification required)
NSW	OEH	N/A	
NSW	FCNSW	N/A	
VIC	DELWP	N/A	Role is outsourced to the Bureau of Meteorology
VIC	CFA	N/A	Role is outsourced to the Bureau of Meteorology
ACT	PCS	N/A	
QLD	HQP	N/A	Role is outsourced.
QLD	QPWS	N/A	QPWS does not have this role.
NT	FRS	N/A	
WA	DPaW	N/A	
WA	DFES	N/A	Role is outsourced to BOM/SOCMET
SA	DEWNR	N/A	Severe Weather Forecaster (Meteorologist)

The responses provided by each agency for training for the Meteorologist role are detailed in the following table.

**Table 25** Training content for the meteorologist role

	TAS	TAS	TAS	NSW	NSW	NSW	VIC	VIC	ACT	QLD	QLD	NT	WA	SA
	PWS	FT	TFS	RFS	OEH	FCNSW	DELWP	CFA	PCS	HQP	QPWS	FRS	DPaW	DENWR
N/A (not applicable) or NNC (no national competencies)	N/A	N/A	N/A	NNC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Agency endorsement (Y/N, TBD = to be developed)				Y										Y

The term 'qualified' for the Meteorologist role seemed appropriate as most agencies with this role either outsourced it to the Bureau of Meteorology or employed a professional meteorologist. No agency conducted training for the role.

### 3.3.12 Incendiary Operator

Ewan Waller and Associates suggested this role was:

*'An authorised agency person responsible for the operation, servicing, handling and storage of the aerial incendiary machine and associated consumables for a prescribed burn.'*

**Table 26** Context of the incendiary operator role within the responding agencies

Juris.	Agen.	Alternative name	Comment
TAS	PWS	Aerial Incendiary Machine (AIM) Operator / Bombardier	Same role as for wildfire
TAS	FT	N/A	
TAS	TFS	N/A	
NSW	NSW RFS	Air Incendiary Bombardier	Same role as for wildfire
NSW	OEH	Air Incendiary Bombardier	Same role as for wildfire
NSW	FCNSW	-	
VIC	DELWP	Air Incendiary Bombardier	Same role as for wildfire
VIC	CFA	N/A	
ACT	PCS	Air Incendiary Operator or IO	Same role as for wildfire. Needs to be a Divisional Commander
QLD	HQP	Aerial Incendiary Machine Operator	
QLD	QPWS	Aerial Incendiary Operator or Bombardier	
NT	FRS	N/A	
WA	DPaW	Aerial Incendiary Bombardier	Same role as for wildfire
WA	DFES	N/A	
SA	DEWNR	Incendiary Machine Operator	

Insufficient information was provided by agencies to identify whether agencies sourced aerial ignition services from other agencies or just did not use them at all.

The responses provided by each agency for training for the Incendiary Operator role are detailed in the following table.

**Table 27** Training content for the incendiary operator role

	TAS	TAS	TAS	NSW	NSW	NSW	VIC	VIC	ACT	QLD	QLD	NT	WA	SA
	PWS	FT	TFS	RFS	OEH	FCNSW	DELWP	CFA	PCS	HQP	QPWS	FRS	DPaW	DENWR
N/A (not applicable) or NNC (no national competencies)		N/A	N/A			N/A		N/A				N/A		
Agency endorsement (Y/N, TBD = to be developed)	Y			Y			Y		Y	Y	Y		Y	Y
PUAFIR408B Plan aircraft operations									✓	*				
PUAFIR401B Obtain incident intelligence									✓	*				
PUAFIR315B Navigate from an aircraft.									✓	✓				
PUAFIR313B Operate aviation support equipment.														✓
PUAFIR312B Operate aerial ignition equipment in an aircraft	✓	✓		✓	✓					✓	✓		✓	✓
PUAFIR209B Work safely around aircraft				✓			✓		✓	✓	✓		✓	✓
Division commander									*					
Crew member				*						*	*		*	
Incident Controller														
Basic Wildfire Awareness							✓							

The survey results indicate a wide variety of training delivered for the role. In particular this relates to the pre-requisite roles, which vary from Basic Wildfire Awareness (base level awareness course) to experience in the Division Commander role. Alternatively, the survey respondents may not have been aware of the relevant training within their agencies.

Ewan Waller and Associates did not expand the training requirements for these pre-requisite roles in this case.

### 3.3.13 Incendiary Operations Navigator

Ewan Waller and Associates suggested this role was:

*‘An authorised agency person responsible for the safe, effective and efficient conduct of aerial incendiary operations for a prescribed burn to prescription, including direction of the pilot and aerial incendiary machine operator, and liaison with ground crews.’*

**Table 28** Context of the incendiary operations navigator role within the responding agencies

<b>Jur.</b>	<b>Agen.</b>	<b>Alternative name</b>	<b>Comment</b>
<b>TAS</b>	<b>PWS</b>	Navigators	Same role as for wildfire.
<b>TAS</b>	<b>FT</b>	N/A	
<b>TAS</b>	<b>TFS</b>	N/A	
<b>NSW</b>	<b>NSW RFS</b>	Air Incendiary Operations Supervisor	Same role as for wildfire
<b>NSW</b>	<b>OEH</b>	Incendiary Operations Supervisor	No unit of competency for this role as yet
<b>NSW</b>	<b>FCNSW</b>	-	
<b>VIC</b>	<b>DELWP</b>	Incendiary Operations Supervisor	Same role as for wildfire
<b>VIC</b>	<b>CFA</b>	N/A	
<b>ACT</b>	<b>PCS</b>	Incendiary Ops Navigator or Incendiary Ops Supervisor	Same role as for wildfire Needs to be a Divisional Commander
<b>QLD</b>	<b>HQP</b>	-	
<b>QLD</b>	<b>QPWS</b>	N/A	QPWS does not define aerial navigation as a role. Although this role is not defined, suitability experienced staff with local knowledge do (when required) guide and assist air crew during incendiary operations.
<b>NT</b>	<b>FRS</b>	N/A	
<b>WA</b>	<b>DPaW</b>	Incendiary Operations Supervisor	Same role as for wildfire
<b>WA</b>	<b>DFES</b>	N/A	
<b>SA</b>	<b>DEWNR</b>	Incendiary Operations Supervisor	

The responses provided by each agency for training for the Incendiary Operations Navigator role are detailed in the following table.

**Table 29** Training content for the incendiary operations navigator role

	TAS	TAS	TAS	NSW	NSW	NSW	VIC	VIC	ACT	QLD	QLD	NT	WA	SA
	PWS	FT	TFS	RFS	OEH	FCNSW	DELWP	CFA	PCS	HQP	QPWS	FRS	DPaW	DEWNR
N/A (not applicable) or NNC (no national competencies)		N/A	N/A			N/A		N/A				N/A		
Agency endorsement (Y/N, TBD = to be developed)	Y			Y	Y		Y		Y	Y	N		Y	Y
PUAOPE013A Operate communications systems and equipment											*		✓	
PUAFIR511 Conduct Complex Prescribed Burns	✓				*								✓	
PUAFIR408B Plan aircraft operations (role specific)					*								✓	✓
PUAFIR401B Obtain incident intelligence (role specific)					*								✓	
PUAFIR315B Navigate from an aircraft					*								✓	✓
PUAFIR312B Operate aerial ignition equipment in an aircraft				*										
PUAFIR209B Work safely around aircraft	✓			✓	*		✓							
Division or Sector commander					*				*		*		*	
Crew leader				*	*									

Two agencies (NSW OEH and WA DPaW) appear to have well developed training for the role. Other agencies appeared to have less well developed systems. Alternatively, the survey respondents may not have been aware of the relevant training within their agencies.

Ewan Waller and Associates did not expand the training requirements for these pre-requisite roles in this case.

### 3.3.14 Community Engagement

Ewan Waller and Associates suggested this role was:

*‘The person who facilitates and makes recommendations on community engagement for prescribed burns.’*



Source: Northern Territory Fire and Rescue Service

**Table 30** Context of the community engagement role within the responding agencies

<b>Jur.</b>	<b>Agen.</b>	<b>Alternative name</b>	<b>Comment</b>
<b>TAS</b>	<b>PWS</b>	Public Information Officer	Parks and Reserves Manager, Regional Fire Management Officer or Fire Operations Officer A Public Information Officer may be appointed for day/s of burn
<b>TAS</b>	<b>FT</b>	Comms	
<b>TAS</b>	<b>TFS</b>	-	Covered by Community Safety Section in TFS
<b>NSW</b>	<b>NSW RFS</b>	Community Liaison Officer	
<b>NSW</b>	<b>OEH</b>	N/A	
<b>NSW</b>	<b>FCNSW</b>	-	
<b>VIC</b>	<b>DELWP</b>	Community Engagement Officer	
<b>VIC</b>	<b>CFA</b>	Community Education Coordinator (CEC)	
<b>ACT</b>	<b>PCS</b>	N/A	
<b>QLD</b>	<b>HQP</b>	N/A	Community engagement is part of the planning and service delivery requirements of the operational personnel – not undertaken by a separate role
<b>QLD</b>	<b>QPWS</b>	Public Information Officer	QPWS does not train staff for specific Incident Management Team (IMT) roles. The Incident Controller will determine if the Incident (burn) is of sufficient complexity requiring this role within IMT
<b>NT</b>	<b>FRS</b>	Station Officer Hazard Abatement	
<b>WA</b>	<b>DPaW</b>	N/A	Role performed by Prescribing Officer (Burn Planner) in association with others
<b>WA</b>	<b>DFES</b>	Community Engagement or Public Information Officer	
<b>SA</b>	<b>DEWNR</b>	-	

Generally, the Community Engagement role was seen as either:

- A role performed by a person appointed to a substantive position; or
- A planning function that is the responsibility of the Incident Controller and delegated to a Planning Officer or a Public Information Officer as required.

Interestingly, several agencies explained that community engagement occurred as part of the planning process, which was undertaken well before the burn, often as part of a much larger bushfire mitigation program.

Further community engagement was not required unless the burn escaped, in which case it became a wildfire and the agencies' incident management arrangements were put into place, including the appointment of a Public Information Officer.

The responses provided by each agency for training for this role are detailed in the following table.

**Table 31** Training content of the community engagement role

	TAS	TAS	TAS	NSW	NSW	NSW	VIC	VIC	ACT	QLD	QLD	NT	WA	SA
	PWS	FT	TFS	RFS	OEH	FCNSW	DELWP	CFA	PCS	HQP	QPWS	FRS	DPaW	DENWR
N/A (not applicable) or NNC (no national competencies)				NNC	N/A	N/A				N/A	N/A			
Agency endorsement (Y/N, TBD = to be developed)		N		Y			Y	Y	N			Y	Y	Y
PUAOPe021A Manage information function at an incident	✓		✓					✓					✓	
AIIMS for IMT	✓		✓	✓										
Station Officer												✓		

### 3.3.15 Logistics

Ewan Waller and Associates suggested this role was:

*'The person responsible for sourcing and maintaining the human and physical resources to support the prescribed burning program.'*

**Table 32** Context of the logistics role within the responding agencies

Jur.	Agen.	Alternative name	Comment
Jur.Agen.		Alternative name	Comment
TAS	PWS	Logistics Officer	
TAS	FT	Logistics Officer	
TAS	TFS	-	All Station Officers and Leading firefighters can perform this role (trained as Sector Commander)
NSW	NSW RFS	N/A	Role undertaken by Incident Controller.
NSW	OEH	Logistics Officer	Same as AIIMS role
NSW	FCNSW	-	
VIC	DELWP	Logistics Officer	
VIC	CFA	Planned Burn Resource Coordinator (PBRC) – project based	
ACT	PCS	N/A	
QLD	HQP	N/A	This sub-division of AIIMS roles is not required.
QLD	QPWS	Logistics Officer	QPWS does not train staff for specific IMT roles. The Incident Controller will determine if the Incident (i.e. the burn) is of sufficient complexity requiring this role within IMT.
NT	FRS	Station Officer Hazard Abatement	
WA	DPaW	N/A	Role performed by District Duty Officer. Logistics unit is too complex for planned burn applications.
WA	DFES	Logistics Officer	
SA	DEWNR	N/A	Role performed by Fire Resource Officer or Duty Officer or State Duty Officer

In general, agencies saw the Logistics role as part of the function of the Incident Controller and the delegation of this function for prescribed burns managed on-scene was not required.

Where multiple burns were overseen by an Incident Controller located in an office, or by a regional or state duty officer, this role was delegated as required.

The responses provided by each agency for training for this role are detailed in the following table.

**Table 33** Training content of the logistics role

	TAS	TAS	TAS	NSW	NSW	NSW	VIC	VIC	ACT	QLD	QLD	NT	WA	SA
	PWS	FT	TFS	RFS	OEH	FCNSW	DELWP	CFA	PCS	HQP	QPWS	FRS	DPaW	DENWR
N/A (not applicable) or NNC (no national competencies)				N/A	N/A		N/A		N/A	N/A	N/A			
Agency endorsement (Y/N, TBD = to be developed)	Y	N	Y					Y				Y	Y	Y
PUAOPE022A Manage logistics for a Level 2 incident	✓		✓					✓					✓	
Intro to AIIMS	✓				✓									
Station Officer and Leading firefighter training (TAS TFS)			✓									✓		

A number of agencies mentioned they did not conduct training specifically for this role.

### 3.3.16 State/Territory Burn Coordinator

Ewan Waller and Associates suggested this role was:

*‘Responsible for prioritising and monitoring the delivery of prescribed burn operations at jurisdictional level, compiling reports and preparing briefings.’*

**Table 34** Context of the state/territory burn coordinator role within the responding agencies

Jur.	Agen.	Comments
TAS	PWS	Role performed Fire Duty Officer (Planned Burn Coordinator) and Regional Fire Management Officers Cert IV or Diploma in Public Safety desirable
TAS	FT	Role performed by Manager Fire Management
TAS	TFS	Role performed by State Operations
NSW	NSW RFS	Role performed by Director Coordinated Risk Management (higher education qualification required)
NSW	OEH	Role performed by EBMP Coordinator
NSW	FCNSW	-
VIC	DELWP	Role performed by the Statewide Planned Burning Coordinator
VIC	CFA	CFA PB Coordinator monitors tactical standards only
ACT	PCS	N/A
QLD	HQP	Responsibility for PB implementation and strategy is responsibility of Regional Managers and Fire Protection Manager
QLD	QPWS	Regional Fire Coordinator – Operational oversight of implementation and performance rests with regional management
NT	FRS	N/A
WA	DPaW	Manager Fire Management Service Branch with State Duty Officer managing daily activities
WA	DFES	-
SA	DEWNR	Senior Fire Management Officer Operations in consultation with Regional Fire Management Officer's

In general, agencies saw this role as part of the business-as-usual arrangements for the management of fire-related activity within the agency or jurisdiction.

No agency specified any units of competency for the role or conducted vocational training for this role, although Tasmania PWS considered a Certificate IV or Diploma in Public Safety to be a desirable qualification for the role.

### 3.3.17 State/Regional/Agency Strategist

Ewan Waller and Associates suggested this role was:

*‘The person responsible at the for analysing data and recommending long term (10+ years) fuel management strategies (using PB) at the state/jurisdictional scale, cognisant of state / agency policies and objectives and economic, environmental and social requirements.’*

**Table 35** Context of the state/regional/agency strategist role within the responding agencies

Jur.	Agen.	Comments
TAS	PWS	State Fire Commission / Fuel Reduction Unit / Fire Management Area Councils / Regional Fire Management Officers Cert IV or Diploma in Public Safety desirable
TAS	FT	Manager Fire Management and Regional Fire Coordinator
TAS	TFS	Role performed by State Operations
NSW	NSW RFS	Role performed by Regional Mitigation and Compliance Officer
NSW	OEH	-
NSW	FCNSW	-
VIC	DELWP	
VIC	CFA	CFA Community Safety and Operations Managers contributes to State and Regional Fire Planning Committee process
ACT	PCS	N/A
QLD	HQP	Responsibility for PB implementation and strategy is responsibility of Regional Managers and Fire Protection Manager
QLD	QPWS	Strategic oversight, performance monitoring and policy development rests with the State Fire Management Team
NT	FRS	N/A
WA	DPaW	Regional Fire Leader at region level, Manager Regional Fire Services at state level
WA	DFES	-
SA	DEWNR	Role performed by Senior Fire Ecologist, Senior Fire Planner

Similar to the State/Territory Burn Coordinator role, the agencies considered this role to be part of the business-as-usual arrangements for the management of fire-related activity within the agency or jurisdiction.

No agency conducted vocational training for this role for prescribed burning, although Tasmania PWS considered a Certificate IV or Diploma in Public Safety to be a desirable qualification for the role.

### 3.3.18 Burn Outcome Evaluation and Monitoring

Ewan Waller and Associates suggested this role was:

*‘The person who assesses the outcomes of a prescribed burn program or a burn.’*

**Table 36** Context of the burn outcome evaluation and monitoring role within the responding agencies

Jur.	Agen.	Comments	Jur.
TAS	PWS	N/A	Undertaken by Burn Plan Author – Complex Burns
TAS	FT	N/A	
TAS	TFS	N/A	Role performed by Fuel Reduction Unit
NSW	NSW RFS	N/A	Undertaken by the Prescribed Burn Planner
NSW	OEH	N/A	
NSW	FCNSW	-	
VIC	DELWP	N/A	The monitoring, evaluation and reporting of the outcomes of the burn objectives is addressed through the Regional Monitoring Evaluation and Reporting Plan.
VIC	CFA	-	Role undertaken by Vegetation Management Officer (VMO)
ACT	PCS	N/A	
QLD	HQP	N/A	Responsibility for PB implementation and strategy is responsibility of Regional Managers and Fire Protection
QLD	QPWS	N/A	Responsibility for post burn assessment against burn objectives is the responsibility of the Incident Controller.
NT	FRS	Station Officer Hazard Abatement	
WA	DPaW	-	District Fire Coordinator or nominee
WA	DFES	N/A	Varies depending upon complexities and objectives
SA	DEWNR	N/A	Role undertaken by Prescribed Burn Operations Officer and Environment Assessment Officer

Post burn monitoring was considered an essential yet evolving area and agencies were divided about whether responsibility lay with the burn planner, burn manager or with the accountable manager.

The responses provided by each agency for training for this role are detailed in the following table.

**Table 37** Training content of the burn outcome evaluation and monitoring role

	TAS	TAS	TAS	NSW	NSW	NSW	VIC	VIC	ACT	QLD	QLD	NT	WA	SA
	PWS	FT	TFS	RFS	OEH	FCNSW	DELWP	CFA	PCS	HQP	QPWS	FRS	DPaW	DENWR
N/A (not applicable) or NNC (no national competencies)	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A			N/A
Agency endorsement (Y/N, TBD = to be developed)								Y				Y	Y	
As for Burn Planner and Burn Mgr													✓	
Station Officer												✓		



*Source: Department of Environment, Water and Natural Resources, South Australia*

### 3.3.19 Additional agency specific roles

Ewan Waller and Associates invited agencies to advise of any additional roles for prescribed burning. The following table lists these roles.

**Table 38** Additional agency specific roles

Jur.	Agen.	Role	Description
TAS	PWS	Burn Plan Technical Reviewer – simple burns	Responsible for reviewing each planned burn element for content as well as evaluating the risk to ensure that the objectives can be safely and successfully achieved whilst meeting policy and management objectives and current operational standards.  Requires at least 3 years' experience in a fire ground supervision role i.e. L2 Sector Cmdr. and be appointed at that level or above in fire suppression situations.  Maintain currency by reviewing at least four "simple" burn plans every two years.
		Burn Plan Technical Reviewer – complex burns	Responsible for reviewing each planned burn element for content as well as evaluating the risk to ensure that the objectives can be safely and successfully achieved whilst meeting policy and management objectives and current operational standards.  Required to maintain currency by reviewing at least four "complex" burn plans every two years and/or have current endorsement from the TFS Chief Officer for a L3 fire ground management role.
		Burn Reviewer	Person responsible for reviewing a planned burn where there has been an adverse outcome in relation to staff and public safety, damage to assets or other values.
TAS	FT	-	
TAS	TFS	-	
NSW	NSW RFS	-	
NSW	OEH	Prescribed Burn Plan Assessor	All staff assessing prescribed burn plans must have Crew Leader competency as a pre-requisite and attend the Prescribed Burning course and the following units of competency from the Public Safety Training Package must be achieved:  <i>PUAFIR513 Develop complex prescribed burning plans</i>  <i>PUAFIR511 Conduct complex prescribed burns</i>  Must have Branch Director approval to assess burns.

<b>Jur.</b>	<b>Agen.</b>	<b>Role</b>	<b>Description</b>
<b>VIC</b>	<b>DELWP</b>	Aerial Driptorch Operator	Authorised agency person responsible for the operation, servicing, handling and storage of the aerial driptorch machine and associated consumables for a prescribed burn.
		Self-propelled Incendiary Flare Operator	Authorised agency person responsible for the operation, servicing, handling and storage of self-propelled incendiary flares for a prescribed burn
<b>VIC</b>	<b>CFA</b>	Media Liaison Officer	Person who provides information about the burn(s) to the public.
		Plant Operators	plant operators prepare burn perimeter controls by either blading a mineral earth fuel break or close slashing of vegetation which is then wetted down just prior to lighting.
<b>ACT</b>	<b>PCS</b>	-	
<b>QLD</b>	<b>HQP</b>	-	
<b>QLD</b>	<b>QPWS</b>	Fire Strategy developer	Regionally based natural resource staff responsible for the development of park-based fire strategies that guide local fire management strategies.
<b>WA</b>	<b>DPaW</b>	-	
<b>WA</b>	<b>DFES</b>	-	
<b>SA</b>	<b>DEWNR</b>	Prescribed Burning Contractors - Weed Spray Operators	
		Prescribed Burning Contractors - Ramble Survey Officer	

After visiting the agencies, Ewan Waller and Associates also thought consideration could be given to the following role.

**Table 39** Suggested researcher role

	<b>Role</b>	<b>Description</b>
<b>Ewan Waller &amp; Associates</b>	Burn Researcher	Responsible for reviewing and applying, as appropriate, research and best practice in burn management situations.

## **4 CURRENT TRAINING DELIVERY FOR PLANNING AND CONDUCTING PRESCRIBED BURNS**

### **4.1 Summary**

Agencies agreed that the person planning the prescribed burn and the person lighting the planned burn needed to be appropriately trained. This Section summarises the delivery of training in the following nationally endorsed units of competency for prescribed burning.

- *PUAFIR412 Conduct Simple Prescribed Burns;*
- *PUAFIR413 Develop Simple Prescribed Burn Plans;*
- *PUAFIR511 Conduct Complex Prescribed Burns; and*
- *PUAFIR513 Develop Complex Prescribed Burn Plans.*

#### **4.1.1 Accredited training**

Where agencies used accredited training, they used some or all of the nationally endorsed units of competency for prescribed burning.

A number of agencies delivered a combined training course for both planning and conducting prescribed burns (simple or complex) with participants selecting their preferred assessment context (operations, planning or both). The training was frequently delivered through a partnership arrangement with either other agencies or with private providers

Agencies that used firefighting roles to manage prescribed burning did not train people in these units but relied on their general fire training. This was particularly relevant in northern Australia where prescribed burning was the major fire activity undertaken.

#### **4.1.2 Unaccredited training**

One agency trained to an equivalent level to the national endorsed units of competency for prescribed burning, complete with assessment, but did not issue statements of attainment for the units. Several other agencies noted they were unable to recognise the non-accredited training following the transfer of personnel between the agencies, both on a permanent basis or when providing short term assistance.

Other agencies supplemented their accredited training with additional non-accredited components.

### **4.2 Examples by jurisdiction**

This Section contains examples of approaches to the delivery of training for planning and conducting prescribed burning. Note that not all agencies provided examples suitable for inclusion in this Section.

#### 4.2.1 Tasmania

Prescribed burning for fuel reduction burning in Tasmania is coordinated by the recently established Fuel Reduction Unit (FRU) within TFS. The FRU works closely with PWS, FT, local government, private forestry industries, farmers and the general community to deliver a single fuel reduction program. The FRU is also responsible for planning, consulting and communicating with communities about the fuel reduction program.

The FRU conducts most prescribed burns as joint agency burns, with agencies deployed in accordance with their skill sets. PWS and FT also conduct prescribed burning outside of this program for agency specific purposes.

##### Parks and Wildlife Service

In addition to the delivery of fuel reduction burns as part of the fuel reduction program, PWS also delivers its own program of ecological burns.

PWS aligns its training to the PSTP units of competence, with the intent of issuing full qualifications where possible. Training for firefighting roles is conducted jointly with the other Tasmanian fire agencies and this is expected to expand to also include joint training for prescribed burning.

PWS is not a RTO and works in partnership with a private RTO or TFS (also an RTO) to develop and deliver fire training. Trainers and assessors are provided jointly by PWS and the providers, and are required to maintain competence in the skill areas. PWS maintains training records (including competency maintenance) on the departmental employment records database LADDER.

PWS incorporates all five currently endorsed units of competency for prescribed burning into its courses as follows:

- Firefighter training incorporates *PUAFIR213 Assist with Prescribed Burning*;
- The four units of competency relating to planning and conducting prescribed burns are incorporated into the one course, and people choose their preferred assessment context, for either simple or complex burns, in either a planning or an operational context; and
- PWS conducts workshops on prescribed burning to ensure continuous learning opportunities are provided for all persons involved in planned burning.

PWS supports the 'Burning sticks' program by sponsoring Aboriginal Rangers to attend workshops in Cape York and by undertaking burns collaboratively on Aboriginal and PWS tenure. There are similarities between rainforest in both Tasmania and Queensland.

##### Tasmania Fire Service

Most of the burns conducted by TFS are local asset protection burns although TFS is increasingly assisting other agencies with larger, more remote burns as part of the fuel reduction program managed by the FRU.

TFS is an RTO with trainers and assessors with field experience. Training is aligned with progression through the TFS rank structure and pay points. Prescribed burning units of competency are included as part of the pay point advancement.

Leading Fire Fighters are trained in the following units that enables them to supervise a crew or sector and develop, conduct and assess simple prescribed burns.

- *PUAFIR412 Conduct Simple Prescribed Burns*; and
- *PUAFIR413 Develop Simple Prescribed Burn Plans*.

The training is conducted in a practical environment and trainees must attain qualification from two burns under the supervision of an assessor or work place expert, such as from the FRU.

The training does not cover all of the diverse range of vegetation types found in Tasmania and TFS expects people to learn more about these areas as part of their professional development over time.

As an RTO, TFS does not currently have the units of competency relating to planning and conducting complex prescribed burns on its scope of registration and therefore does not currently deliver them.

An impediment to involvement in more complex and remote burns, which are usually of longer duration than simple burns, relates to the difficulty of releasing people from fire station shifts.

### Forestry Tasmania

FT works in partnership with PWS and TFS to deliver the fuel reduction program established by the FRU.

Additionally, FT has its own program of high intensity burning for regeneration purposes following logging operations.

FT trains its staff for general firefighting using a partnership arrangement with TFS, an RTO. However, it conducts its own unaccredited training in prescribed burning, and this training is currently undergoing review.

## 4.2.2 Victoria

### Country Fire Authority

CFA has three levels of prescribed burn: complexity rating 1 (CR1), complexity rating 2 (CR2) and complexity rating 3 (CR3). Most CFA burns are at complexity rating CR2.

CFA currently delivers two planned burn training courses:

- Since 2004, CFA has conducted a five-day course for career staff (and some volunteers) designed to deliver all the elements of *PUAFIR406 Plan a Prescribed Burn* and some of the elements of *PUAFIR407 Conduct Prescribed Burns* (both units now superseded). Although invited, very few volunteers completed this course since it required midweek attendance;
- Generally only *PUAFIR406 Plan a Prescribed Burn* was awarded, as most staff did not get an opportunity to conduct a prescribed burn. Many attended the training purely to satisfy a requirement for promotion. However, if staff showed evidence of participation and were assessed conducting a burn satisfactorily, they were awarded *PUAFIR 407 Conduct a Prescribed Burn*;
- CFA is currently updating this course to meet the requirements of the new competencies; and

- From 2016 onwards, CFA has conducted a short course in *PUAFIR412 Conduct Simple Prescribed Burns*. This comprises a two-day weekend course with an extra day for the practical assessment. Satisfactory completion of all the assessment requirements, including evidence of practical participation and satisfactory conduct of a simple burn, results in the unit of competency being awarded and evidence for endorsement as a CFA Burn Controller.

### Department of Environment, Land, Water and Planning

DELWP considers all prescribed burns to be complex and currently runs a five-day course for the Burn Officer in Charge (BOIC) role (i.e. Burn Manager/Operations Officer). The course is unaccredited but DELWP advise it is the equivalent of:

- *PUAFIR511 Conduct Complex Prescribed Burns*; and
- *PUAFIR513 Develop Complex Prescribed Burn Plans*.

All students complete a pre-course assessment to confirm existing knowledge.

The course is delivered by experienced prescribed burning practitioners and fire effects researchers. It has a large field-based practical component.

Theory assessment is conducted at the end of the course. Following the course, students are involved in the planning and delivery of local burns and, when ready, are assessed in the delivery of a minimum of two burns. Successful students are then accredited as departmental BOIC.

To remain accredited, a BOIC has to provide evidence of conducting three burns each five years and must attend any BOIC information updates and provide evidence of a knowledge of the updated information. One of the burns is investigated to ensure departmental processes and procedures have been followed.

#### 4.2.3 New South Wales

##### Rural Fire Service

RFSNSW delivers two courses:

- Prescribed Burning Supervisor (at district level) covers *PUAFIR412 Conduct Simple Prescribed Burns*; and
- Prescribed Burning Planner (at state level) covers *PUAFIR513 Develop Complex Prescribed Burn Plans*.

##### Office of Environment and Heritage

OEH is an Enterprise Registered Training Organisation (ERTO). OEH delivers training from the PSTP for fire management and uses training materials aligned with those of the other fire management agencies. Appropriately trained and qualified NPWS staff are used to develop, deliver and assess fire training.

OEH maintains a database of staff competency on Aurion, which is also used to task staff to firefighting and prescribed burning roles. All staff maintain a record of their firefighting currency by noting shifts and tasks performed in their Fire Incident Field Guide (Reporting Booklet). At annual

fire preparedness days, all staff present their Fire Incident Field Guide to the Fire Preparedness Day Coordinator for verification and this information is then transferred to the currency database kept in Aurion.

OEH conducts a single Prescribed Burning Course, which covers the following units:

- *PUAFIR513 Develop Complex Prescribed Burning Plans*; and
- *PUAFIR511 Conduct Complex Prescribed Burns*.

The course applies to a number of different roles, with each having different pre-requisite pathways and different assessment requirements as follows:

- A Prescribed Burn Planner requires:
  - Crew Leader pre-requisite;
  - *PUAFIR513 Develop Complex Prescribed Burning Plans*; and
  - post-course assessment activities.
- A Burn Incident Controller requires:
  - Division Commander pre-requisite;
  - *PUAFIR511 Conduct Complex Prescribed Burns*; and
  - post-course assessment activities.
- A Prescribed Burn Plan Assessor requires:
  - Division Commander pre-requisite;
  - *PUAFIR513 Develop Complex Prescribed Burning Plans*;
  - *PUAFIR511 Conduct Complex Prescribed Burns*;
  - post-course assessment activities; and
  - Branch Director approval.

Participants attend the course and then select the role or roles for assessment.

### **Forestry Corporation of NSW**

FCNSW currently include *PUAFIR213 Assist with Prescribe Burning* as part of their Forest Firefighter training so that all those involved in firefighting have a broad understanding of prescribed burning.

FCNSW does not deliver the other prescribed burning units of competency as they cover these skills in their Crew Leader and Group Leader training and certification. If FCNSW is conducting a simple prescribed burn, then a Crew Leader or more senior person will be the Incident Controller and if it's a complex prescribed burn, a Group Leader or more senior person will be the Incident Controller.

#### 4.2.4 Australian Capital Territory

ACT RFS is an RTO, through which PCS partners for general firefighter training.

Most of the prescribed burning in the ACT is conducted by PCS, supported by the other agencies. They do not deliver any of the currently endorsed units of competency for prescribed burning as the agencies deem firefighting roles to be the equivalent of prescribed burning roles.

Although PCS does not deliver accredited training for prescribed burning, it delivers a one-day Fire Lighting Patterns Course. This course provides members of lighting crews, lighting crew supervisors and incident controllers with knowledge and practical skills in correct incendiary devices and lighting patterns to achieve required burning outcomes.

The main objectives of the course are:

- Understanding and demonstrated use of different incendiary devices;
- Understanding of lighting patterns; and
- Demonstrated ability to use correct equipment and techniques to achieve the required burning outcome.

Skills maintenance requirements apply for this training.

#### 4.2.5 Queensland

##### Queensland Parks and Wildlife Service

All QPWS prescribed burns are managed in accordance with AIIMS principles and classified as either standard or Red Flag. Personnel undertaking Red Flag burns require extensive experience in addition to the relevant mandatory training requirements for the roles being performed.

QPWS works in partnership with a private RTO that manages all the accredited training administration. Courses are developed internally and delivered/assessed by QPWS instructors.

QPWS fire training is progressive and, after they have completed the Sector Commander/Level 1 Incident Controller course, all fire operations personnel are eligible to attend the Type 1 Planned Burn course. Additional pre-requisites are completion of a one-day unaccredited Fire Weather 1 course and a one-day unaccredited Overall Fuel Hazard Assessment course.

The Type 1 Planned Burn course covers:

- *PUAFIR412 Conduct Simple Prescribed Burns;* and
- *PUAFIR413 Develop Simple Prescribed Burn Plans.*

The course focus is fire in the environment and achieving appropriate environmental outcomes through planned burning. Priority attendance is given to operational personal. Personnel without fire experience but who are involved in developing fire strategies and burn plans may attend but are not eligible to receive the accredited competencies. The course comprises 80% agency-specific policy and process.

The course covers:

- QPWS policies, processes, fire strategies and zoning;
- Fire vegetation groups, regimes and bio-regional Planned Burn Guidelines;
- Planned burn ignition scheduling and priority programming;
- The QPWS process and approvals system; and
- Performance indicators and fire reports.

#### **4.2.6 Western Australia**

DPaW and DFES have developed a joint prescribed burning training course. Both agencies are RTOs and the course is run through both RTOs. The course can be conducted either jointly or by each agency independently. The first pilot course has just been conducted.

This course addresses the following units of competency:

- *PUAFIR413 Develop Simple Prescribed Burn Plans;*
- *PUAFIR412 Conduct Simple Prescribed Burns;*
- *PUAFIR513 Develop Complex Prescribed Burn Plans; and*
- *PUAFIR514 Conduct Complex Prescribed Burns.*

Successful participants enrol for assessment in either simple or complex burns, depending on their preference. However, at the moment, these units of competency are not on the agencies' scope of registration and statements of attainment cannot be issued until this process is complete.

The training and assessment materials for the course are comprehensive and were developed prior to the AFAC materials for the same units. The wide range of vegetation types in WA means that the training package has relevance from the tropics though to wet sclerophyll forest areas, encompassing the majority of Australian fire ecosystems.

The trainers have extensive fire management and prescribed burning experience and are required to maintain their practical skills to meet RTO requirements. They are assisted by subject matter experts for each of the fuel types.

Students have two years from the date of enrolment to complete assessments. This is due to the limited opportunities available to conduct the required burns. To be successfully assessed, participants need to provide completed examples of two burn plans of the required level of complexity (simple or complex) and conduct core ignitions of two prescribed burns of the required level of complexity (simple or complex).

The practical assessments are conducted in the vegetation type selected by the participant, usually the vegetation type in their local area of work.

The agencies are in the process of developing a formal process to authorise people to conduct specific roles in prescribed burning.

The agencies maintain records of formal training on a central departmental database. The formal recording of agency authorisations and skill levels for prescribed burning is still being developed.

#### **4.2.7 South Australia**

CFS is the RTO for all fire training in South Australia and the DEWNR is the custodian of the prescribed burning courses. DEWNR conducts a five-day prescribed burning course that incorporates the following two units:

- *PUAFIR513 Develop Complex Prescribed Burning Plans*; and
- *PUAFIR511 Conduct Complex Prescribed Burns*.

All the trainers and assessors are operational and other agencies are invited to attend the course.

The assessment includes theory assessment and a post-course practical assessment involving conducting a complex prescribed burn. Participants are assigned a mentor.

Course delivery and assessment materials are comprehensive and include use of the relevant AFAC training manuals.

#### **4.2.8 Northern Territory**

The focus of fire agencies in Northern Territory is on fuel management, rather than on fire suppression.

Fuel management in NT is the responsibility of the landowner and many landowners manage large tracts of land as businesses, supported by professional teams, which sometimes include prescribed burning planners. Prescribed burning is fully integrated into all normal land management practices.

BNT is the lead government agency for rural fire management in the Northern Territory. BNT's role includes helping Territory landowners prepare for bushfire, and developing fire education and training programs for school students and Aboriginal communities. BNT staff manage fires on public land, supported by local brigades, and maintain an oversight of all fire activity in the Northern Territory.

Because the majority of the work of BNT involves prescribed burning, BNT equates firefighting with prescribed burning, rather than an additional activity, and all normal fire training courses include training in prescribed burning. BNT uses the AIIMS structure to manage both fire and burning.

Northern Territory Aboriginal Land Councils (Central, Northern and Tiwi) conduct large amounts of burning. There has been a dramatic increase in this activity in recent times due to burning being part of the carbon economy and a large source of income for the Councils. Many of the people conducting the burning are untrained and there is an unaddressed need in this area.

Urban fire management in Northern Territory is overseen by FRS. FRS conducts prescribed burning on gazette land, such as in and around major townships. Fuel management is a major part of the work of career staff, with many of the burn areas being burnt annually. As part of career progression, FRS delivers training to staff in:

- *PUAFIR412 Conduct Simple Prescribed Burns*; and
- *PUAFIR413 Develop Simple Prescribed Burn Plans*.

Trained FRES officer are supported by volunteer firefighters.

## **5 RECOMMENDATIONS TO IMPROVE TRAINING DELIVERY**

Section 4 outlines how the agencies in each state and territory have well-developed training courses for prescribed burning. This Section identifies the issues and opportunities with the delivery of prescribed burning training in the agencies, and the potential for a future national approach.

### **5.1 Characteristics of a more national approach**

Prescribed burning practice introduces fire into the landscape and requires the people planning and conducting prescribed burning to manage a range of risks. Poor practice in prescribed burning can potentially lead to loss of life and extensive damage to property, infrastructure and the environment. Additionally, the fire agencies and their governments can subsequently incur extensive reputational damage, which can adversely affect the practice of the whole industry.

Additionally, bushfires do not adhere to land boundaries and continuity of fuel management practices across all land tenures, including public and private land, is needed to effectively reduce bushfire risk. The AFAC *National Position on Prescribed Burning* (AFAC 27 October 2016) (detailed in Section 1.2.3) identifies that the future of prescribed burning involves an integrated and cooperative approach across all land tenures, with responsibility shared between all landholders.

A more national and consistent approach to prescribed burning training will help to reduce the risks of prescribed burning and assist to build government, industry and community confidence in prescribed burning practice. Additional benefits will be improved agency interoperability and increased cross tenure burning, which will help to mitigate the impact of large bushfires.

### **5.2 Issues and opportunities**

During the survey, the agencies identified a number of issues and opportunities with the delivery of training. These issues related to the delivery of the competencies to plan and/or conduct both simple and complex prescribed burns.

#### **5.2.1 Training for all fuel types**

A key issue for prescribed burning training is the difficulty of delivering prescribed burning training in multiple fuel types across a wide range of risk profiles, terrain and areas.

The agencies were not consistent when asked if their training covers all fuel types. Some claimed their training covered most of the broad fuel categories in Australia (that is, forest, spinifex, mallee heath and grassland) whereas others said it was not possible to train people for all the fuel types, even within their own jurisdiction, and that this knowledge needed to be acquired through experience following the training.

At the TRG workshop in March 2017, agency representatives agreed it was not reasonable to expect prescribed burning training to cover all fuel types in Australia and that the training should relate to the principles of prescribed burning, supported by examples in the local fuel types. Competency in other fuel types, even within the same jurisdiction, would be built over time through experience.

This also meant that a person working in an unfamiliar fuel type should be accompanied by a person familiar with prescribed burning in that fuel type and its associated risks.

### Recommendation

1. Prescribed burning training should relate to the principles of prescribed burning, supported by examples in the local fuel types, with competency in other fuel types built through experience over time.

#### 5.2.2 RTO and course administration

Most agencies had difficulty administering their courses to current RTO requirements. This issue applied to all fire related training, not to just prescribed burning training.

Nearly all agencies commented on the difficulty they had in updating the records of personnel to new competency requirements whenever there was a change. This was evidenced during the survey, where a number of agencies indicated they were struggling to update their training records and were therefore continuing to deliver superseded training.

Agencies employing training professionals or delivering training in partnership with or under the auspices of another RTO appeared to have fewer issues than those that persisted alone. Key to taking this action was consideration of whether administering accredited training was the core business of the agency or could be outsourced in some way.

Some agencies that used training professionals (in addition to fire training professionals) seemed comfortable administering accredited training and in some cases were able to access large amounts of additional government funding. TAS PWS provided a good example of where additional funding had been obtained.

In contrast, despite having a central RTO for all training in the department, the fire training staff at WA DPaW continued to experience onerous administrative workloads. Additionally, they had difficulty getting the currently endorsed prescribed burning units of competency on the RTO scope of registration, despite being the agency with the primary responsibility for this type of work in WA and having fully developed course materials. The issue appeared to relate to the agency proving it had staff qualified in the unit of competency.

Opportunities to potentially reduce the workload involved with RTO administration are discussed in Section 5.3.

#### 5.2.3 Trainer and assessor workload

A number of agencies reported difficulty in sourcing qualified trainers and assessors for prescribed burning training and noted the difficulty these people had in maintaining their practical skills. Few agencies had full time trainers and assessors, and most used experienced qualified operations personnel for these roles. Nearly all agencies mentioned that workloads then became an issue, with trainers and assessors struggling to maintain their practical burning skills. Skills maintenance is required to meet RTO requirements and trainers and assessors ideally need to manage a number of prescribed burns in a number of different vegetation types annually. This is in addition to their training workload.

This situation is exacerbated in land management agencies where fire training work and skills maintenance is additional to the workload relating to the trainers' substantive positions.

Opportunities to potentially reduce trainer and assessor workloads are discussed in Section 5.3.

#### **5.2.4 Confidence in the skills of personnel from other jurisdictions**

The agencies discussed whether it was reasonable to assume people from different agencies and trained in the same unit of competency for prescribed burning held the same skills and knowledge.

Building on the discussion in Section 5.2.1, the agencies agreed that people from different agencies should have comparable training in the principles of prescribed burning plus a knowledge of burning in local fuel types. However, this was not entirely the case.

The survey indicated that although all agencies identified a cluster of competencies for each prescribed burning role, the combination of competencies was different for each agency. This came as somewhat a surprise, as many people had assumed people from different agencies performing a similar role were trained to the same standard. The agencies agreed that standard minimum training requirements for each key prescribed burning role fundamentally underpins a more national and consistent approach to prescribed burning training and practice.

Most agencies expressed complete confidence in the competence of a person who acquired a statement of attainment in the prescribed burning competencies through accredited training. The units of competency provided the standard for the training and the RTO standards ensured the training was delivered and assessed according to the standard (providing quality assurance). Additionally, there was a process for the continual improvement and update of the competencies and associated materials.

However, because of the administrative workload involved in managing accredited courses and difficulty with the assessment process, some agencies elected to use agency-specific courses and requirements rather than accredited training. This practice did not support interoperability. In the event of a permanent transfer or temporary deployment of a person from another agency, the receiving agencies were not confident of the person's competency where their training had been unaccredited. In these situations, the receiving agency found it to be difficult and time consuming to determine the equivalence between the training in the two jurisdictions and generally found it easier to completely retrain the incoming person.

Some agencies conducted unaccredited training because they were in the process of registering the relevant units of competency on scope of registration of their RTO, and the use of unaccredited training is an interim stage. However, these agencies train and assess to the standard of accredited training and intend to eventually issue successful students with statements of attainment.

#### **Recommendation**

2. Agencies should use accredited training for prescribed burning roles, as the units of competency provide a national training standard and the RTO standard provide quality assurance of training delivery.

3. Standard national minimum training requirements should be developed for each key prescribed burning role.

### **5.2.5 Limited opportunities for practical assessment**

Most agencies required students to plan and/or conduct at least one prescribed burn to complete their assessment. Usually this was done on return to the person's home location and involved them working in a familiar locality and fuels. However, a number of agencies (TAS TFS, WA DPaW, VIC DELWP and TAS FT) noted the limited periods that conditions were suitable for burning and therefore the limited opportunities students had to complete their assessment.

To address this issue, some agencies extended the time available for completing the assessment, for example WA DPaW and DFES gave students up to two years to complete their practical assessment, but this led to long periods before people qualified.

It is not easy to work out a solution to this problem. There are a limited number of burns scheduled in each local area and the window of opportunity to undertake these is limited. Options could include the agency centrally managing the allocation of trainees to burns, prioritising the allocation of burns to people needing to complete their training or moving people away from their local area to complete their burns. Ewan Waller and Associates believe the agencies need to actively manage this issue.

In the United States, the US National Interagency Prescribed Fire Training Centre in Tallahassee conducts courses to provide opportunities for some people to complete their practical training for prescribed burning.

The opportunity for Australia to develop a national training centre for prescribed burning is discussed in Section 5.3.

## **5.3 Options to create a more national approach**

This section examines options to improve and create a more national approach to prescribed burning training. The key issues to be addressed are:

- the need to alleviate the workload in meeting RTO and course administration requirements;
- the need to provide on-going support for agency trainers and assessors; and
- the need to improve the consistency of training delivery between agencies.

### **5.3.1 Reducing the RTO administration workload**

#### **Partnerships with other fire agencies**

The agencies recognised the benefits that have arisen from past resource exchanges during bushfires and the potential benefits that could arise from multiple agencies working together to train for and conduct prescribed burning. These benefits include the sharing of expertise in burning in different fuel types and across different land tenures. Joint agency training builds interagency relationships, encourages interoperability and potentially increases the amount of cross tenure conducted. It also means that experienced trainers with high credibility can be more widely used.

However, the agencies were concerned that developing joint agency materials involves an increased cost and trainer workload, as all content needs to be negotiated between the agencies. Additionally,

many of the agencies currently use different competency clusters and training pathways for the key prescribed burning role and these differences take time and effort to resolve.

Ewan Waller and Associates consider the benefits of joint agency training to outweigh the disadvantages. However, prior to insisting on joint agency training the agencies need to consider the workload involved and ensure appropriate resources and support are provided to trainers and assessors to support integration.

### Recommendation

4. Agencies should consider a collective approach to conducting prescribed burning training and provide staff with the level of support needed to successfully integrate agency training systems.

### Partnerships with a private RTO

Nearly all agencies mentioned they struggled to keep up to date with RTO administration. Agencies suggested one way for easing this burden was to partner another RTO (either a private provider or another fire agency). The RTO manages the course administration, takes responsibility for delivering the training, issues statements of attainment and manages student records. The agency provides trainers and assessors, delivers the training sessions and maintains an overview of the course to ensure it meets industry needs.

As an example, TAS PWS partners a private RTO for the delivery of prescribed burning training. The RTO administers the course and TAS PWS provides the trainers and assessors. To minimise the risks, TAS PWS maintains oversight of the training delivery and assessment. Through this arrangement, TAS PWS has eliminated the RTO administrative workload but not the workload of agency trainers and assessors, and reliance upon an external RTO and commercial costing are emerging issues.

Although the arrangement comes with a continued trainer workload and commercial costing, Ewan Waller and Associates note a partnership approach with another RTO for the delivery of training is a potential option for alleviating the administrative burden.

During the workshop in March 2017, agencies suggested that all prescribed burning training could potentially be delivered through the one national RTO. This would potentially ensure national consistency in delivery standards and alleviate the administrative workload of the agencies. Additionally, through applying a combined approach to the delivery of prescribed burning, the single RTO could potentially seek additional training funding. Ewan Waller and Associates did not investigate this option but noted the suggestion AFAC could become the central RTO.

### Recommendation

5. Where agencies find administering an RTO to be onerous, they should consider delivering prescribed burning training under the auspices of another RTO. Potentially, this could comprise a single national RTO.

### 5.3.2 Providing support for agency trainers and assessors

#### Training contractors

Most of the agencies did not favour the full outsourcing of prescribed burning training as trainers and assessors need to retain practical currency and the agencies considered this only possible where these people were closely associated with agency prescribed burning practice. WA DPaW commented:

*'The use of private providers is not an option here at this time as no private providers have the required levels of competence. For small agencies, outsourcing the training to private providers can appear attractive. However, the maintenance of standards and trainer currency can be problematic. Secondly if the skills are core to the agency the level of risk in this approach may be unacceptably high.'*

Additionally, some agencies commented that some private RTOs conducted assessments using simulations rather than actual prescribed burns and that they were unable to accept people trained by these RTOs as competent.

In the future, it is expected there will be an increase in the use of contractors to deliver prescribed burning. This is discussed more fully by Ewan Waller and Associates in their report for the Prescribed Burning National Capability Optimisation sub-project. The report states there is clear evidence across the agencies of a rapidly developing contract industry, with a number of agencies having engaged suitably trained, skilled and equipped fire management contracting businesses supporting their prescribed burning programs. The report recommends AFAC maintains a central registry of specialist fire management contractors with prescribed burning skills and equipment, and that this includes specifications for training, equipment and experience. By working across jurisdictions as the seasons allow, prescribed burning contractors could have equal or potentially more experience in prescribed burning compared with agency personnel. Although not discussed in the Prescribed Burning National Capability Optimisation report, prescribed burning contractors could potentially become RTOs or deliver training through other RTOs.

Ewan Waller and Associates determined the fire agencies generally did not support outsourced prescribed burning training at the moment, although this may become more feasible in the future. However, outsourced training is currently suitable for the delivery of prescribed burning training to non-fire agencies and other user groups. These groups and their training needs are discussed in Section 8.1 of this report.

Maintenance of a register of approved training contractors could be one of the programs coordinated through a national centre of excellence, discussed in Section 5.3.3.

#### Recommendation

6. A register of approved contractors, suitable for providing assistance and advice on prescribed burning training and practice to both agencies and other user groups, should be established and maintained.

*(Note this recommendation links with the recommendation on contractors in the report on Prescribed Burning National Capability Optimisation sub-project.)*

## Credentialed practitioners

The agencies noted private RTOs often used retired agency personnel or volunteers as trainers and, while these people provide a valid resource for the delivery of training, their expertise is sometimes questionable.

Agencies suggested that one way to ensure contractors have the necessary skills and experience would be to credential them through the AFAC Emergency Management Professionalisation Scheme (EMPS). The EMPS is a process that formally recognises the skills, abilities and experience of practitioners and can apply equally to personnel from AFAC member agencies or to individuals from commercial or government entities. Credentialing is not currently available for prescribed burning or training roles, but its potential could be further investigated.

## Recommendation

7. The credentialing of experienced prescribed burning practitioners through the AFAC Emergency Management Professionalisation Scheme (EMPS) should be considered.

## A pool (register) of trainers

At their workshop in March 2017, the TRG discussed the extent to which people from other jurisdictions could deliver prescribed burning training. They agreed:

- The principles of prescribed burning are generic to all agencies and could be delivered by people external to the agency. Potentially the underpinning knowledge for prescribed burning could even be delivered through an on-line learning module;
- Legislation, policy and procedure is agency specific and could not be effectively delivered by external trainers; and
- Prescribed burning in specific fuel types is location specific and needed to be delivered by someone with expertise in the specific fuel types. Some fuels are widespread across Australia (for example, forest, spinifex, mallee heath and grasslands) and trainers from other jurisdictions could assist with training in these fuels. However, other fuels were location specific (such as fuels in some of the northern states and fuels in parts of Tasmania) and only local trainers could deliver on these.

With these limitations in mind, agencies supported forming a pool of trainers, from across the agencies and potentially including credentialed practitioners, to be shared across jurisdictions. Trainers from the pool could alleviate the workload of local trainers, help develop new trainers and provide support in the event of a trainer shortage. They could assist with moderating assessments and help to achieve a more national approach to prescribed burning training. A key function would be to share expertise and to promote best practice.

A perceived impediment was the pressure that trainers and assessors already face in their home agencies and the difficulty there could be in identifying suitable trainers for sharing. The option of credentialed practitioners being part of the pool was therefore considered a valid option.

Coordination of a pool of trainers and assessors could be one of the programs coordinated through a national Centre of Excellence for Prescribed Burning, discussed in Section 5.3.3.

### Mobile national training unit

A similar concept was a mobile national training unit, comprising a group of professional trainers and practitioners, moving seasonally to different regions.

The advantages of the mobile training unit were similar to the advantages of a pool of trainers, including the benefits of shared expertise to help develop trainers and practitioners, the alleviation of workload, the promotion of national best practice and the potential to moderate assessments across agencies. The focus would be on developing local trainers, rather than replacing them, as local knowledge would still be required for training delivery. A mobile training unit could also showcase technology, research and updated burning techniques.

Some agencies suggested there was a risk that the unit might not be available when required or there may be jurisdictions competing for its attendance when the burning conditions were right. Potentially this could result in the smaller states missing out on a visit from the unit and then not having back up trainers at the ready to deliver the training. However, this could be alleviated if there were several units that could be used simultaneously.

Coordination of a mobile training unit could be one of the programs coordinated through a national Centre of Excellence for Prescribed Burning, discussed in Section 5.3.3.

### Recommendation

8. A national program to support agency trainers and practitioners in prescribed burning should be initiated. This could include visiting trainers and experts, and the showcasing of best practice techniques, the findings of research and the latest technology.

#### 5.3.3 National facilities

##### National centre of excellence

Agencies agreed a national Centre of Excellence for Prescribed Burning could potentially coordinate the professional development needs of both prescribed burning trainers and prescribed burning practitioners, as well as the needs of other user groups.

The centre could assist fire agencies and potentially other groups build capacity and capability in prescribed burning through such things as:

- maintaining a register of a pool of approved agency trainers, contract trainers or credentialed prescribed burning practitioners;
- conducting a 'train-the-trainer' program for prescribed burning trainers and assessors;
- providing on-going support to trainers and assessors through agency visits, professional development programs, mentoring programs and potentially the moderation of assessment results;
- providing practitioners with advice, information on best practice, research and new techniques in prescribed burning;
- providing post burn evaluation services and disseminating the findings of inquiries and review;
- maintaining a 'lessons learnt' register;

- facilitating inter-jurisdictional visits or exchanges of resources or practitioners;
- leading and communicating research, including creating partnerships with industry and educational institutions, such as universities;
- hosting workshops and site visits;
- developing training materials, such as those designed for people with lower literacy levels or for northern Australian conditions; and
- promoting increased public acceptance of prescribed burning.

A new national Centre of Excellence for Prescribed Burning has been established with seed funding from the National Centre of Excellence for Prescribed Burning Project.

### Recommendation

9. The Centre of Excellence for Prescribed Burning coordinate a range of programs to assist fire agencies and other user groups build capacity and capability.

### National training centre

Section 5.2.4 outlined the limited periods in each jurisdiction where conditions were suitable for burning and therefore the limited opportunities students had to complete their practical assessments. A number of agency personnel have visited or studied at the US National Interagency Prescribed Fire Training Centre, Tallahassee, Florida and have suggested a similar centre be established in Australia to address this issue.

The Tallahassee Centre is part of the US National Interagency Fire Centre and provides opportunities for federal, state, local and tribal government agencies and other organisations to build skills and knowledge of prescribed fire, with an emphasis on field experience. The centre is not used by all agencies, but rather those that have limited opportunities for practical training, as attendance is costly. Only a few burn officers-in-charge from each jurisdiction are able to attend. Students study the theory of prescribed fire within their own state agency, prior to attending the centre, and return to their own state following attendance to continue developing on their agency's training pathway.

The centre is supported by an incident management team that coordinates the location of suitable burn sites across three states and the attendance of course participants at these burns. The advantages are that participants are placed in a new situation for each burn and are forced to work within the process, rather than rely on instinct.

Ewan Waller and Associates discussed the potential for such a centre to be established in Australia. Several agencies (VIC CFA and ACT PCS) were particularly enthusiastic about a centre located somewhere in south eastern Australia. The enthusiasm extended to identifying a potential site where forestry training is currently undertaken and a RTO partnership could be formed, and which was also within range of a number of forests suitable for burning. TAS FT, which conducts training in high intensity regeneration burning, also supported the idea as they could see the opportunity to link with VIC DELWP, which also conducts some high intensity regeneration burns (although at a much reduced level) to share experience and knowledge.

However, other agencies were not supportive. TAS TFS explained the Tasmanian fuel reduction and ecological burning perspective.

*'This approach is not the best outcome for our state. As we have such a diverse range of flora that burns at different parameters I think it would be a great solution to have our own training centre focusing on each of our different environments. The predictive modules don't work as one in Tasmania with Prometheus working in the West and Phoenix working in the East so I would encourage that as a trainer we need to address the different climate topography, wind and weather effects in the Tasmanian environment to achieve quality training in our home state. As an integrated unit bouncing ideas of each agency involved in the tri-agency agreement.'*

WA DPaW gave their perspective:

*'Given the huge variation in vegetation, landform, fire behaviour, prescribed burning models and agency responsibilities and processes, it would be very difficult to develop a truly national training school. The first step would be to agree on what such a centre would deliver. It would be impractical to expect all people to attend at a central venue, meaning that the people who did attend would have a motive other than simply learning about planning and conducting a burn. The national approach could be used to identify key issues which should be considered when planning and conducting a prescribed burn and standard levels of knowledge and skill (as per current unit of competencies). Agencies can use these to develop procedures and practices that suit the social, political, economic and physical environment in which they plan and conduct prescribed burns. A national centre might be used to take practitioners and develop them into trainers – ensuring that whatever national approaches were agreed were incorporated into an agency's training.'*

In summary, while most agencies supported the idea of cross agency training they did not support the concept of a national training centre. The agencies were concerned the training would not address the specific vegetation types and the legislative and procedural context of each jurisdiction, and that it would be costly to send participants interstate to attend the training. However, the concept may be revisited in the future, possibly through the Centre of Excellence for Prescribed Burning, and as a national approach to prescribed burning matures.

## Recommendation

10. While a national training centre could provide increased opportunities for students to undertake practical course work, the agencies are currently not comfortable with this concept. This may change once a national approach to training matures. In the interim, agencies should actively seek and make available opportunities for students to complete their practical course requirements.

## 6 RECOMMENDATIONS TO IMPROVE TRAINING CONTENT

In this Section, Ewan Waller and Associates discuss whether the currently endorsed units of competency for prescribed burning are appropriate, need amending or whether new units of competency are required.

The currently endorsed units of competency in the PSTP for prescribed burning are:

- *PUAFIR213 Assist with Prescribed Burning;*
- *PUAFIR412 Conduct Simple Prescribed Burns;*
- *PUAFIR413 Develop Simple Prescribed Burn Plans;*
- *PUAFIR511 Conduct Complex Prescribed Burns; and*
- *PUAFIR513 Develop Complex Prescribed Burn Plans.*

### 6.1 Issues and opportunities

This section discusses agency views about the relevance and content of the current units of competency in prescribed burning.

#### 6.1.1 Levels of prescribed burns

Ewan Waller and Associates investigated whether the split between the units of competency for simple and complex prescribed burns is appropriate.

As discussed in Section 3.1, a number of agencies liken managing a simple burn to managing a level 1 incident and managing a complex burn to managing a level 2 or level 3 incident. Simple prescribed burns are generally conducted by career officers and volunteers from the urban and rural fire agencies on discrete parcels of land primarily around the rural-urban fringe. While a fire escape from a simple burn is possible, it is likely to be suppressed quickly as the fire perimeter is generally small.

The audience for the training for complex prescribed burns is mainly experienced forest and wildfire firefighters from land management and rural fire agencies. Complex prescribed burns are generally conducted on broad acreage in complex terrain and fuels. These burns may be near the rural urban fringe, but may also be in remote areas. Because a complex burn generally has a large perimeter and is in difficult country, a fire escape may take some time, effort and cost to be controlled and may result in a major bushfire with potentially catastrophic consequences on large areas and multiple communities.

A person trained to conduct complex burns is also trained to conduct simple burns.

However, VIC CFA suggested there are three levels of prescribed burn management, similarly to the three levels of incident management. The third level is very complex burns. Through investigation, it appeared that most agencies agreed with this concept.

In the prescribed burning context, this means there are two levels of training (for simple and complex burns) and the people planning and conducting very complex burns require considerable additional experience, which is only attained over time.

### Recommendation

11. The current split between the units of competency for simple and complex prescribed burns should be retained as this reflects the varied work contexts of the agencies.

#### 6.1.2 'Planning' versus 'conducting' prescribed burns

The agencies had different processes for planning prescribed burns.

In some agencies, the people planning and conducting prescribed burns were either the same people or were a team of people that worked closely together. These agencies delivered both units together, because they thought it important for a burn planner to also understand how a burn was conducted, and for a burn operations officer to understand how burn planning is undertaken. Trainees then selected the unit (or units) they wished to have assessed. In many cases only one unit was awarded.

TAS TFS commented

*'It is important that burn planners have a thorough understanding of the techniques and requirements of burn implementation, in order to be able to produce burn plans that are safe, workable and that deliver the burn objectives'.*

In other agencies, the process for planning prescribed burns was entirely separate from the burn implementation process, with local representative bushfire committees developing the plans. These agencies delivered separate training for planning and conducting prescribed burns.

Overall, the agencies agreed the current split in the units of competency for planning and conducting prescribed burns gave them the option for delivering the training in a way that best suited their agency context.

### Recommendation

12. The current split between the units of competency for planning and conducting prescribed burns should be retained as this gives the agencies the option for delivering training in either or both these contexts.

## 6.2 Gaps in the current units of competency

### 6.2.1 Lighting patterns

An area identified for strengthening within the current units of competency was developing lighting patterns to achieve burn objectives.

## Lighting patterns for ground ignition

All agencies identified designing the correct lighting patterns as fundamental to achieving burn objectives and to safety,

ACT PCS runs a one-day course in Fire Lighting Patterns for lighting crews, ignition crew supervisors and incident controllers. However, ACT PCS does not deliver the currently endorsed units of competency in prescribed burning, so this course did not provide evidence that a new national unit was needed.

Other agencies thought that crew member and crew leader training needed more information on lighting patterns. However, these agencies did not train these people in *PUAFIR213 Assist with Prescribed Burning*, which is designed to meet this need. The agencies that delivered this unit did not report a problem.

Ewan Waller and Associates concluded a new unit of competency in designing lighting patterns was not required and strengthening the current units would resolve any shortcomings.

## Lighting patterns for aerial ignition

Aerial ignition is used extensively by the fire agencies, other government agencies, large landholders and indigenous communities in northern Australia, mainly for complex prescribed burns.

Several agencies identified the need for the content relating to lighting patterns for aerial ignition of complex burns to be strengthened in the current units of competency.

## Recommendation

13. The current units of competency for planning prescribed burns need strengthening to include more detail on designing lighting patterns, in particular more detail on designing lighting patterns for aerial ignition of complex burns.

### 6.2.2 Risk management

The agencies thought that the units relating to planning prescribed burns needed greater emphasis on risk management, in particular relating to:

1. Incorporating the risk management information developed by the National Burning Project on managing fuel hazard, smoke and greenhouse emissions, ecology and operations; and
2. The general principals of assessing and treating risk.

## Incorporating the risk management information developed through the National Burning Project

The agencies were interested in how the training for planning and conducting prescribed burning should incorporate the risk management information developed by the National Burning Project on managing fuel hazard, smoke and greenhouse emissions, ecology and operations. The inclusion of this information is necessary if the outputs of the National Burning Project are to be 'operationalised'. However, at the moment there is too much information to be included and it would need summarising.

Ewan Waller and Associates noted the existing units of competency for planning prescribed burns included content on risk management but this needed to be strengthened to include the areas of risk identified by the National Burning Project. The AFAC training materials also need amending to include a summarised version of this information.

### Recommendation

14. The current units of competency in prescribed burning need strengthening to include the areas of risk identified through the National Burning Project. The associated training materials need amending to include a summarised version of this information.

*(Note: the associated training materials were updated recently summarising the risk management material from the National Burning Project).*

### Assessing and treating risks

Some agencies thought the units of competency for prescribed burning should include generic training in assessing and treating risks.

However, Ewan Waller and Associates noted there are already a number of currently endorsed units of competency in risk management, including within the PSTP, and suggested agencies consider including these in their competency clusters for prescribed burning.

As an example, TAS PWS delivers the following units as part of Crew Member training:

- *PUAEMR027 Assess Operational Risk* – The unit covers the first four steps of the risk management process and provides the skills and knowledge required to conduct a risk assessment. This unit applies to people working in a relatively simple and routine workplace in which they use the organisation’s policy and procedures. They would normally have local supervisory/management responsibility and will apply known solutions to a variety of predictable problems; and
- *PUAEMR026 Treat Operational Risk* – This competency applies to workers at a relatively simple and routine level, in which they use established organisational policy and procedures. Workers would normally have local supervisory or management responsibility and apply known solutions to a variety of predictable problems.

### Recommendation

15. Agencies requiring more training in risk management processes should consider using the existing units of competency on risk management within the PSTP.

#### 6.2.3 Training for strategic and support roles

The survey identified that, for a number of prescribed burning roles, the agencies lacked consistency in the training or didn’t have any training at all.

## Strategic roles

The agencies didn't have any training for the following roles, as they saw these as the responsibility of a substantive position in the agency and for which professionals, trained through higher education processes, were recruited:

- State / Regional/ Agency Strategist; and
- State Burn Coordinator.

Ewan Waller and Associates noted that burn programs in many jurisdictions now comprise large and complex operations and, rather than develop new competencies, there would be value in periodic national workshops to discuss and share approaches to planning and management of strategic landscape-scale prescribed burning programs.

## Recommendation

16. Professional development workshops and activities should be conducted in planning and managing strategic prescribed burning programs.

## Environmental management roles

A number of agencies saw environmental management as a key area of risk for prescribed burning. However, they were varied regarding the need for the following roles:

- Environmental Monitoring; and
- Burn Outcome Evaluation and Monitoring.

The agencies with these functions saw them as the responsibility of fire managers or of another substantive position within the agency, for which qualified professionals were recruited.

QLD QPWS delivered training in environmental management and commented this was 80% agency specific.

Ewan Waller and Associates saw this as emerging area for which national workshops could be conducted. Because of the differences between the environments in northern and southern Australia, potentially north/south workshops could be conducted.

## Recommendation

17. Professional development workshops and activities should be conducted in monitoring and evaluating the environmental impact of prescribed burns.

### Incendiary Operations Supervisor role

The survey included a review of training for the Incendiary Operations Supervisor role, which supervises aerial ignition, and noted a disparity in the training delivered by agencies.

At their workshop, the TRG noted that the AFAC Fire and Emergency Aviation Technical Group (FEAT) is currently investigating training for the Incendiary Operations Supervisor role and recommended the National Burning Project take no further action on developing training for this role.

### Fire Behaviour Analyst

A number of agencies used the Fire Behaviour Analyst role for prescribed burning, as well as for fire suppression, but were inconsistent in the training for this role. Some agencies used agency-specific requirements or unaccredited training that was delivered by subject matter experts.

At their workshop, the TRG noted that the AFAC Predictive Services Group is currently investigating training for this area and recommended the National Burning Project take no further action on developing training for this role.

### Standard AIIMS roles

The TRG workshop identified that the following roles were standard AIIMS roles and the training needs for these roles are already addressed by existing units of competency within the PSTP:

- Incident Controller;
- Resources Officer;
- Logistics Officer; and
- Community Engagement (Public Information Officer).

### Recommendation

18. The National Burning Project should take no further action on the training for standard AIIMS roles, aviation roles and for Fire Behaviour Analysts, as this training is being addressed through other processes.

*(Note: the National Burning Project has concluded since this report was initially produced, and took no action in these areas as recommended).*

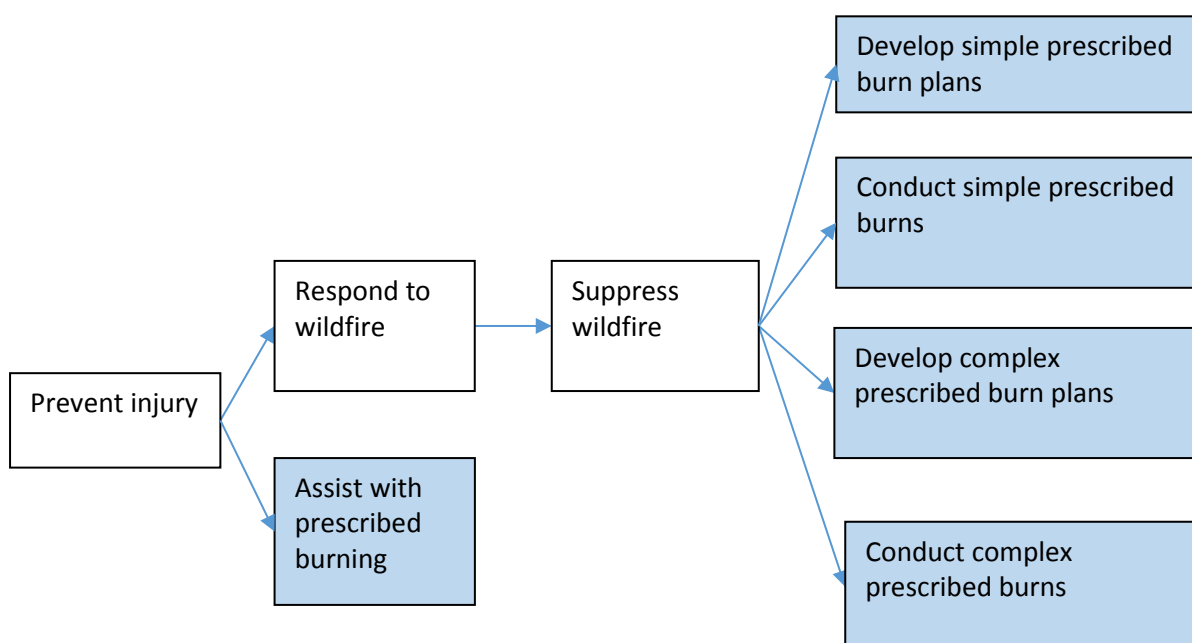
## 7 RECOMMENDATIONS TO IMPROVE THE COMPETENCY FRAMEWORK

In this Section, Ewan Waller and Associates discuss the current framework for the prescribed burning units of competency; the issues involved and propose a new framework.

### 7.1 Current competency framework

The current competency framework in the PSTP for prescribed burning is depicted as follows. The units of competency shaded in white are the pre-requisites for the units of competency shaded in blue.

**Figure 1** Current competency framework



The framework comprises:

- two levels of prescribed burn: simple and complex;
- separate competencies for planning and conducting prescribed burns;
- pre-requisite requirements for training in safety and operational firefighting prior to training to plan or conduct a prescribed burn; and
- a pre-requisite requirement for training in safety prior to training to assist with prescribed burning.

The levels of competency and the separation of competencies were discussed in Section 6.1, as part of the review of the content of the competencies. The continued need for the units to have pre-requisites is discussed later in this Section.

## 7.2 Discussion of the competency framework

Currently, the agencies differ in the application of the units of competency to the prescribed burning roles and development pathways. In general, each agency specifies:

- prescribed burning roles;
- the unit/s of competency that apply to the role (if any);
- the other units of competency (that is, the cluster of competencies) required to perform the role; and
- other agency-specific requirements for the role, such as experience or fitness.

### 7.2.1 Role nomenclature

The survey revealed most agencies used different nomenclature for the key prescribed burning roles. This led to confusion where they were not able to discern the equivalence between their roles. For general firefighting, inter-jurisdictional movement of resources is commonplace and this issue is addressed with the introduction of standard AIIMS roles.

The TRG members identified the scope for AFAC member agencies to similarly facilitate the inter-jurisdictional movement of resources for prescribed burning through adopting standard role names and standard role definitions.

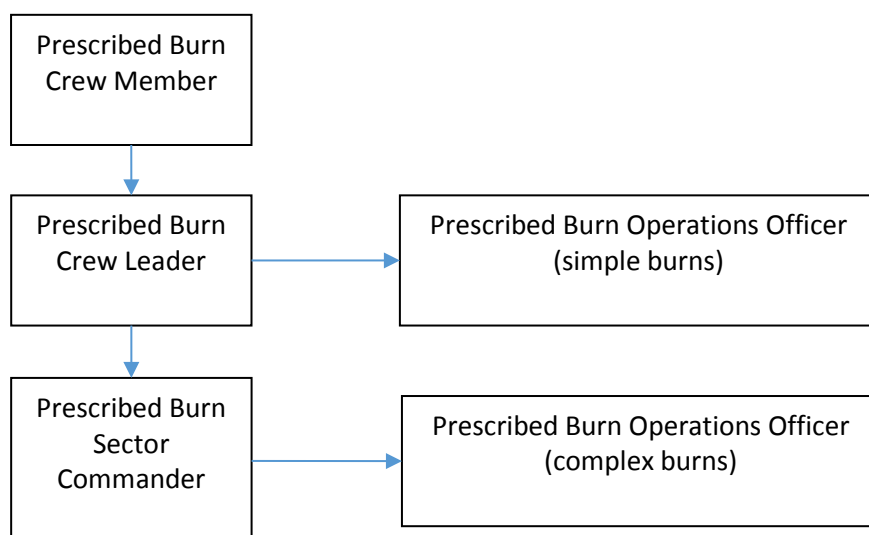
#### Recommendation

19. Agencies should adopt standard role titles and role definitions for key prescribed burning roles.

### 7.2.2 Role pathways

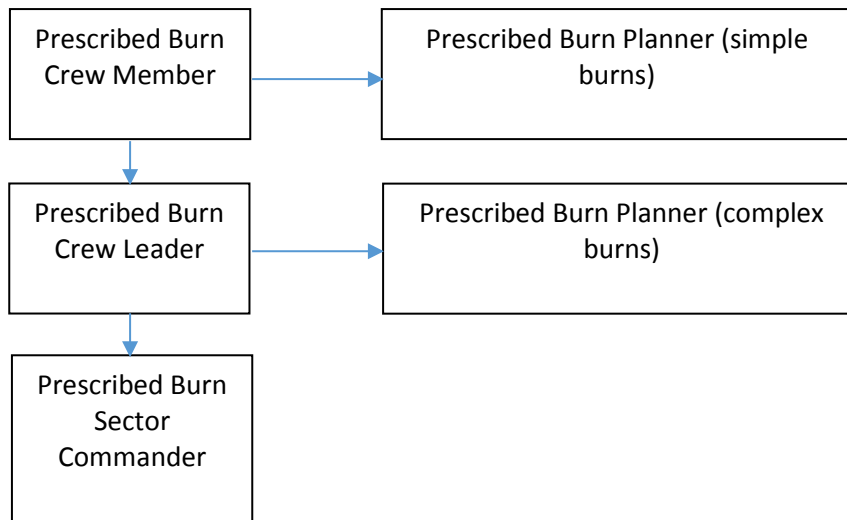
The survey revealed that, despite apparent differences, the agencies were remarkably similar in their role pathways for key prescribed burning roles. For example, using the indicative role titles, the approximate role pathway for the Burn Operations Officer role is as follows:

**Figure 2** Role pathway for burn operations officer



The agencies were also remarkably similar in regard to the role pathway for the burn planner role.

**Figure 3** Role pathway for burn planner



At their workshop in March 2017, the TRG discussed these pathways at length and recognised the potential for the AFAC member agencies to adopt standard (minimum) role pathways for the key prescribed burning roles. These pathways are built into the proposal for a new competency framework, discussed in Section 7.3.

### 7.2.3 Competency clusters

The survey indicated that all agencies shared some core requirements in their competency clusters. For example, all crew members were trained in:

- *PUATAE001B Work in a Team;*
- *PUAFIR215 Prevent Injury; and*
- *PUAFIR204B Respond to Wildfire.*

Agencies then supplemented these core requirements with agency-specific requirements.

Agencies were asked if they would prefer a single competency for each prescribed burning role, but only one agency supported this approach. The majority preferred to continue with the cluster approach, as this allowed them to tailor the training to their agency context.

However, all agencies could see the benefits of agreeing to a standard minimum cluster of competencies for each key prescribed burning role, which they could then supplement with additional agency specific requirements.

### Recommendation

20. Agencies should agree on a standard minimum cluster of competencies for each key prescribed burning role.

#### 7.2.4 Pre-requisite requirements

In general, nationally endorsed units of competency are intended to stand alone. However, a number of fire-related units of competency in the PSTP, including the prescribed burning competencies, have pre-requisite requirements.

The pre-requisite requirements for the prescribed burning units of competency are units in personal safety and fire suppression. Prescribed burning introduces fire into the landscape that can escalate into major fire and potentially cause loss of life and extensive damage to property, infrastructure and the environment. The need for people conducting prescribed burns to also be trained in safety and fire suppression seems logical. The need for prescribed burning planners to be similarly trained and experienced is more open to debate.

Most agencies are comfortable with the inclusion of pre-requisite competencies. However, several commented that the pre-requisite pathways caused an excessive administrative burden and were overly restrictive. WA DPaW commented:

*'The requirement for prerequisites can be onerous in terms of administration load. Each competency should stand alone i.e. either a person is competent or not irrespective of how they acquired the skills and knowledge.'*

To further complicate matters, VIC CFA suggested an additional pre-requisite unit of competency relating to resource supervision needed to be added. The agencies had previously agreed there are similarities between conducting prescribed burns and managing the operations of a fire incident, and the training for incident management places a high emphasis on supervising resources (both people and equipment). It seems reasonable for the training for conducting a prescribed burn to also include a similar requirement.

Ewan Waller and Associates considered whether the current pre-requisite requirements for the units of competency should remain or should be removed. If the pre-requisites are to remain, consideration needs to be given to whether an additional pre-requisite requirement should be added.

To evaluate this issue, Ewan Waller and Associates considered the risks involved with removing the pre-requisites. They noted the agencies had administrative systems (competency clusters, experience requirements etc.) to ensure the people undertaking prescribed burning activities had the appropriate skills. In these situations, the pre-requisite requirements are probably superfluous as the risk of untrained people planning or conducting prescribed burns is managed through administrative controls.

However, the website [www.training.gov.au](http://www.training.gov.au) indicates a range of providers other than the fire agencies can deliver prescribed burning training to other groups or to members of the public. If the pre-requisite requirements are removed, these people may potentially undertake prescribed burning without skills in personal safety, fire suppression or resource supervision. Ewan Waller considered this situation to pose the risk of a serious occurrence that could lead to a loss of government and community confidence in the agencies' ability to conduct prescribed burns.

Additionally, AFAC advised that if the pre-requisite requirement were removed or new ones added, the amended units of competency would be considered 'new' and not be the equivalent of the current units. This would require agencies to transfer all trained personnel across to the new units and would create an additional administrative burden.

## Options

The options to address the pre-requisite issues are:

- To remove all pre-requisites. However, there would be a risk that people trained in the units of competency for prescribed burning would not have skills in safety, fire suppression or supervision. This risk would be managed (or not managed) by agencies and other employers. The amended units of competency would be considered 'new' and agencies would need to transfer all previously trained people across to these units;
- To retain the pre-requisite requirements but add new pre-requisites relating to supervision. This would address the risks but, as the units of competency would now be considered 'new', agencies would need to transfer all previously trained people across to the new units; and
- To retain the current pre-requisite requirements for the units and to consider an alternative approach to managing risk; the formal clustering of competencies for each key prescribed burning role. This is now possible through the establishment of Skill Sets.

Ewan Waller and Associates notes the PSTP process for formally review the competencies will extend well beyond the conclusion of this sub-project. Agencies will have the opportunity to provide further feedback on this issue.

## Recommendation

21. Adding new pre-requisites or removing current pre-requisites from the units of competency will result in the units being considered 'new' and agencies will need to transfer previously trained people across to the new units. Therefore, to avoid additional administration, the current pre-requisite requirements for the units of competency should remain and no further ones be added.

*Note this position will be reviewed during the formal review of the amended competencies.*

## 7.3 Proposed competency framework

### 7.3.1 Defining Skill Sets

At their workshop in March 2017, the TRG proposed Skill Sets<sup>1</sup> for prescribed burning roles for endorsement within the PSTP. The features of Skill Sets are:

- The titles of the Skill Sets will align with prescribed burning roles;

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<sup>1</sup> The National Skills Standards Council *Training Package Products Policy* defines skill sets as 'single units of competency, or combinations of units of competency from an endorsed Training Package, which link to a licence or regulatory requirement, or defined industry need.

*'Skill Sets must include:*

- *advice about logical clustering of units for the skill set in meeting industry needs*
- *advice about Skills Set's relationship with a qualification*
- *suggested title for a statement of attainment*

*Skills Sets must not include elective units.*

*Skill Sets identified and developed within training packages are formally recognised on a statement of attainment. Where a RTO packages a group of units into a Skill Set, a statement of attainment is awarded on successful completion of one or more of those units. RTOs are able to note that the Skill Set has been delivered for a specific purpose.'*

- Each Skill Set will comprise the minimum cluster of competencies required for a role;
- The Skill Set becomes the national minimum training standard for the role;
- RTOs will award a statement of attainment for the Skill Set;
- Agencies can identify people with the minimum training for the role through their Skill Set statement of attainment. Agencies can add additional requirements; and
- The Skill Set can be used as the base requirement for inter-jurisdictional resource exchange.

Concurrently with this project, Ewan Waller and Associates are undertaking the Prescribed Burning National Capability Optimisation (Capability) sub-project, which aims to develop processes and systems to facilitate greater opportunities for the sharing of prescribed burning resources between agencies and across jurisdictions. The report for the Capability sub-project proposes Skill Sets as the minimum training standard for key prescribed burning roles. Some agencies will have requirements additional to these, such as for additional training, experience and fitness requirements.

Section 5.3.2 of this document explained how experienced prescribed burning practitioners could potentially be credentialed through the AFAC Emergency Management Professionalisation Scheme (EMPS). A Skill Set could potentially form the training requirement for credentialing.

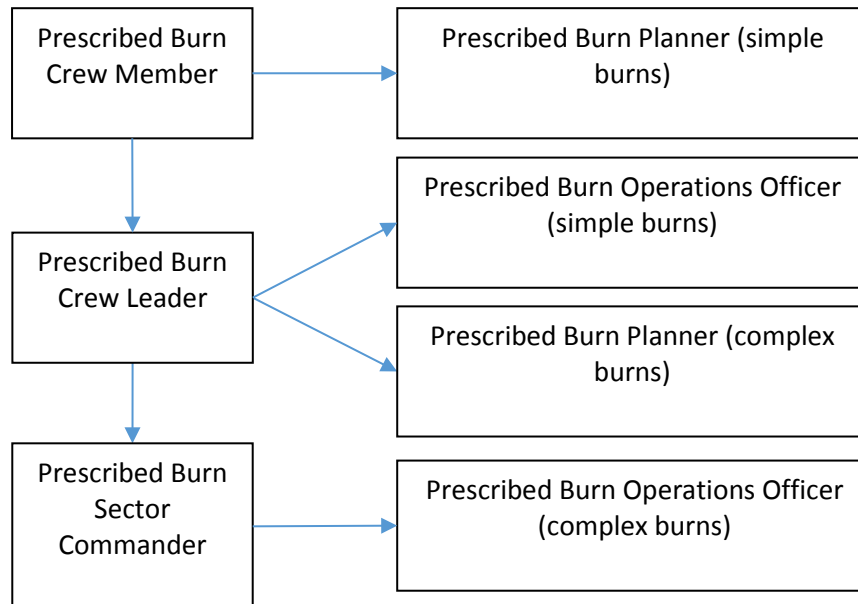
### Recommendation

22. Skill Sets to formalise titles, responsibilities and competency clusters for key prescribed burning roles should be developed and endorsed within the PSTP.

### 7.3.2 Role pathway underpinning the Skill Sets

The TRG suggested the following pathways underpin the Skill Sets for prescribed burning roles.

**Figure 4** Proposed pathways for prescribed burning roles



### 7.3.3 Proposed Skill Sets

The TRG proposed Skill Sets for key prescribed burning roles. The selection of competencies was informed by the results of the survey, summarised earlier in this document and most agencies are able to comfortably meet these requirements.

The most significant change will be the inclusion of the following units of competency in supervision and this may require several agencies to adjust their training:

- *PUAOPE020A Lead a Crew*, to be included in the Prescribed Burn Crew Leader Skill Set; and
- *PUAOPE016A Manage a Multi-Team Sector*, to be included in the Prescribed Burn Sector Commander Skill Set.

**Table 40** Proposed units of competency and skill sets

Proposed Skill Set title	Units of competency proposed for the Skill Set	Logic underpinning the proposed Skill Set
Prescribed Burn Crew Member	PUATAE001B Work in a team PUAFIR215 Prevent injury PUAFIR204B Respond to wildfire	
Prescribed Burn Crew Leader	PUATAE001B Work in a team PUAFIR215 Prevent injury PUAFIR204B Respond to wildfire PUAFIR303B Suppress wildfire PUAOPE020A Lead a crew	<u>Prescribed Burn Crew Member</u> plus: PUAFIR303B Suppress wildfire PUAOPE020A Lead a crew
Prescribed Burn Sector Commander	PUATAE001B Work in a team PUAFIR215 Prevent injury PUAFIR204B Respond to wildfire PUAFIR303B Suppress wildfire PUAOPE020A Lead a crew PUAOPE016A Manage a multi-team sector PUAOPE015A Conduct briefings and debriefings	<u>Prescribed Burn Crew Leader</u> plus: PUAOPE016A Manage a multi-team sector PUAOPE015A Conduct briefings and debriefings
Prescribed Burn Operations Officer (simple burns)	PUATAE001B Work in a team PUAFIR215 Prevent injury PUAFIR204B Respond to wildfire PUAFIR303B Suppress wildfire PUAOPE020A Lead a crew PUAFIR412 Conduct simple prescribed burns	<u>Prescribed Burn Crew Leader</u> plus: PUAFIR412 Conduct simple prescribed burns
Prescribed Burn Operations Officer (complex burns)  <i>Note - may also manage simple burns</i>	PUATAE001B Work in a team PUAFIR215 Prevent injury PUAFIR204B Respond to wildfire PUAFIR303B Suppress wildfire PUAOPE020A Lead a crew PUAOPE016A Manage a multi-team sector PUAOPE015A Conduct briefings and debriefings PUAFIR511 Conduct complex prescribed burns	<u>Prescribed Burn Sector Commander</u> plus: PUAFIR511 Conduct complex prescribed burns
Prescribed Burn Planner (simple burns)	PUATAE001B Work in a team PUAFIR215 Prevent injury PUAFIR204B Respond to wildfire PUAFIR413 Develop simple prescribed burn plans	<u>Prescribed Burn Crew Member</u> plus: PUAFIR413 Develop simple prescribed burn plans
Prescribed Burn Planner (complex burns)  <i>Note - may also plan simple burns</i>	PUATAE001B Work in a team PUAFIR215 Prevent injury PUAFIR204B Respond to wildfire PUAFIR303B Suppress wildfire PUAOPE020A Lead a crew PUAFIR513 Develop complex prescribed burns	<u>Prescribed Burn Crew Leader</u> plus: PUAFIR513 Develop complex prescribed burns

The Skill Sets for crew member, crew leader and sector commander could also potentially be used in the wildfire context, but this sub-project did not cover the necessary consultation for this to occur.

## 8 RECOMMENDATIONS FOR OTHER USER GROUPS

During the surveys and visits, the agencies identified a number of other user groups that conduct prescribed burning and whose needs remain largely unaddressed. These include other government agencies, landholders, plantation companies and indigenous groups, particularly the land councils.

The fire agencies are generally not resourced to deliver training to these user groups. At the moment, many of these user groups are either not trained or are being trained in prescribed burning by other industry training bodies or by private training providers.

If the National Burning Project is to achieve the nationally agreed principles for the implementation of prescribed burning policies and programs, as outlined in the AFAC *National Position on Prescribed Burning* (AFAC 27 October 2016) (detailed in Section 1.2.3) and conduct burning safely and effectively, then future strategies for prescribed burning training must consider options to address the needs of these groups.

A number of these user groups use private providers of training. Section 5.3.2 discusses some of the issues with private providers and suggests there is an opportunity to establish a panel of approved trainers from which these agencies could purchase training. Ewan Waller and Associates note this is the type of program that the Centre of Excellence for Prescribed Burning could coordinate.

### 8.1 Training needs

#### Government agencies, statutory authorities

The fire agencies identified a range of (non-fire) government agencies and statutory authorities that frequently conduct prescribed burning on the land they manage. These include state and federal government departments (including the Department of Defence), local government and water authorities.

Some of these are AFAC and FFMG member agencies (or associate members) or are closely linked with member agencies. Most are engaged in local fire management committees and fire planning. Some have initiated their own prescribed burning training, delivered either internally or through a fire agency or private provider.

In particular, local government was identified as a primary user of prescribed burning where the risks to the community are high and a more structured approach to training would be beneficial.

#### Landholders

Landholders include plantation companies, individual farmers and large pastoral companies, such as the grazing companies in northern Australia, which plan and conduct extensive prescribed burns annually, often with the use of aerial ignition. Almost every state identified private landholders as a major user of prescribed burning but with a significant unaddressed need. Tasmania was an exception, as the State had developed the Red Hot Tip's program to help landholders conduct burns.

## Land councils and other groups

Several agencies identified the indigenous land councils and associated groups in northern WA, NT, QLD and western NSW as having a major training need. The prescribed burns conducted by these groups sometimes involve all parts of the largely untrained community, such as elderly people and children, and carry high risks.

The northern land councils and associated groups plan and conduct extensive prescribed burns annually in order to gain carbon credits as part of the carbon economy. These groups can acquire significant financial benefits from these burns and many are sufficiently motivated to adopt a more professional approach to planning and conducting prescribed burns in the future, including purchasing formal training.

## 8.2 Training standards and pathways

Ewan Waller and Associates consider that if AFAC is to influence a more integrated approach to prescribed burning across land tenures, then it could potentially develop vocational training pathways to offer other user groups. Training pathways developed by the fire and land management agencies is preferable to pathways developed by other industries and providers. These pathways can then be delivered by other providers.

### 8.2.1 Skill Sets for community or local groups

At their workshop, TRG recognised that community groups and local landholders currently conduct and will continue to conduct prescribed burning on their own land; however, they do not work within an AIIMS (or AIIMS-like) framework.

The TRG determined that the fire agencies were better placed than other industry training bodies to provide and maintain an endorsed training pathway for these groups and proposed developing relevant prescribed burning Skill Sets (refer to Section 7.3 for information about Skill Sets).

The proposed Skill Sets for community groups or local landholders provide the minimum skills for a person planning, conducting or assisting with a small burn on private property. In the event of a burn escape, these people should call the fire brigade and the escaped burn would be managed as a fire.

## Recommendation

23. Skill Sets should be developed for community or local groups undertaking small burns on private property and be endorsed within the PSTP.

**Table 41** Proposed Skill Sets for community groups or local landholders.

Proposed Skill Set title (role)	Units of competency proposed to be included in endorsed Skill Set	Logic underpinning proposed Skill Set
<b>Community / Local Prescribed Burn Assistant</b>	PUAFIR213 Assist with prescribed burning PUAFIR215 Prevent injury	
<b>Community / Local Prescribed Burn Supervisor</b>	PUAFIR213 Assist with prescribed burning PUAFIR215 Prevent injury PUAFIR412 Conduct simple prescribed burns	<u>Prescribed Burn Assistant</u> plus: PUAFIR412 Conduct simple prescribed burns
<b>Community /Local Prescribed Burn Planner</b>	PUAFIR213 Assist with prescribed burning PUAFIR215 Prevent injury PUAFIR413 Develop simple prescribed burn plans	<u>Prescribed Burn Assistant</u> plus: PUAFIR413 Develop simple prescribed burn plans

### 8.2.2 Training standards used by other industries

The agencies suggested some other groups currently receive training using competencies from the Agriculture, Horticulture and Conservation and Land Management Training Package, which has the following units of competency:

- *AHCFIR201 Assist with Prescribed Burning*; and
- *AHCFIR502 Plan Prescribed Burning for Fuel, Ecological and Cultural Resource Management*.

No fire agency mentioned delivering these units and it was suggested that the federal Department of Agriculture, Fisheries and Forestry delivered these courses.

Ewan Waller and Associates did not investigate the extent of use of these units but a preliminary investigation found that *AHCFIR201 Assist with Prescribed Burning* has been taken from the PSTP and recoded. However, it has not been maintained and is no longer the equivalent of *PUAFIR213 Assist with Prescribed Burning*. This is of concern as the two units have the same title.

The TRG saw benefit in AFAC and FFMG encouraging other industry training bodies to adopt the relevant units of competency and training pathways from the PSTP. This was because the fire industry, as the experts in fire, maintained these standards to current industry and community expectations.

### Recommendation

24. Other industry training bodies with an interest in prescribed burning should be encouraged to directly adopt the relevant units of competency and training pathways from the PSTP

## 8.3 Training materials for the northern Australian context

It was not within the scope of this sub-project to investigate the quality of agency training materials. However, the agencies commented that the current AFAC training materials were 'southern centric' and contained information and concepts that did not always apply to other user groups or their

environment. The literacy levels in the materials were too high and the delivery methods were often unsuited to this audience.

A similar conclusion was reached regarding the content of the training materials in regard to northern Australian fuels. The representatives of the northern states and territories thought that none of current AFAC training materials for prescribed burning adequately covered the fuels in their jurisdictions, in particular training for burning in gamba grass and buffel grass.

Ewan Waller and Associates discussed whether new units of competency were required or whether new training materials and delivery methods were required. There was agreement that the existing units of competency applied and that new 'northern centric' training materials and delivery methods needed to be developed. NT NTB suggested they had materials for both contexts and could assist in developing these new materials.

### Recommendation

25. Tailored training materials and methods should be developed for prescribed burning in the northern Australian context.

## 8.4 Cultural burning practices

It was not within the scope of this sub-project to further investigate training structures for cultural burning. However, the TRG thought further work in this area would be beneficial, both from the perspective of providing assistance to these groups and also to learn from indigenous burning practices. However, rather than being driven by the fire agencies, a project of this nature would need to fully engage indigenous land councils and other associated groups.

In the interim, any training standards and pathways developed for community groups and local landholders could be offered to indigenous land councils and associated groups.

### Recommendation

26. A project on cultural burning practices should be initiated in conjunction with indigenous land councils and groups.

## 9 ACKNOWLEDGEMENTS

The project to produce this report was made possible through funding from the Attorney-General's Department.

The report was prepared by Ewan Waller, Ian Long and Prue Dobbin of Ewan Waller and Associates for AFAC and FFMG. The report was edited by Wayne Kington.

This project was guided by a Technical Reference Group drawn from AFAC and FFMG agencies. Their contribution is greatly appreciated.

The front cover image was provided by the Department of Environment, Water and Natural Resources South Australia.

The National Burning Project Steering Committee has worked consistently to ensure the project attracted funding, stayed on track and achieved desired outcomes. Their contributions are also acknowledged. The National Burning Project was managed and supported through the considerable efforts of Greg Esnouf and Deb Sparkes.



*Source: Department of Environment and Natural Resources, Northern Territory*

## APPENDIX A: SURVEY

Ewan Waller and Associates requested the following data and information from agencies through the state or territory TRG representative.

### Data requested for indicative prescribed burning roles:

- Is the role a professional role (that is, requires a degree or higher)?  
(The sub-project excluded roles that required a degree-level qualification or higher from requiring further vocational training);
- Does the agency have an equivalent fire suppression role that directly translates into this role? (YES/NO);
- If YES:
  - Name of equivalent role?
  - Does the agency have a training standard for the role?
  - Does the agency formally authorise people to perform the role?
- If NO, does the agency currently sponsor the delivery of training for the role? (YES/NO);
- Where the agency currently sponsors the delivery of training for the role:

#### Delivery

- Name of training provider?
- Is the provider an RTO?
- Who are the trainers and assessors (e.g. the agency/other fire agencies/private providers)?
- Any issues with the delivery of training?

#### Content

- Entry requirements for participants (AIIMS role, another role or units of competency)?
- Is all or part of the training accredited? (YES/NO);
- Current public safety units of competency for prescribed burning covered (insert code/s):
  - *PUAFIR213 Assist with Prescribed Burn;*
  - *PUAFIR412 Conduct Simple Prescribed Burn;*
  - *PUAFIR413 Develop Simple Prescribed Burn Plans;*
  - *PUAFIR511 Conduct Complex Prescribed Burn;* and
  - *PUAFIR513 Develop Complex Prescribed Burn Plans.*
- Other units of competency covered (insert code/s);
- Description of non-accredited component;
- Issues with content; and
- Are new units of competency required? If so, please identify.

## **Additional questions**

Agencies were asked to complete the following questions where they had time. They formed the basis of discussions during the visit by Ewan Waller and Associates.

### **Management of prescribed burning training**

1. How does your agency provide strategic oversight and manage the overall delivery of the prescribed burning training program?
2. To what extent does your agency conduct prescribed burning training in partnership with other agencies within your state/territory/New Zealand and also with agencies in neighbouring jurisdictions?
3. What are your agency's primary issues in relation to prescribed burning training?

### **Delivery of prescribed burning training**

4. Does the training and assessment for prescribed burning include a practical component involving actual prescribed burns?
5. To what extent does the training and assessment cover all the fuel types and prescribed burn applications both within the jurisdiction (i.e. state/territory or New Zealand) and also those in other jurisdictions?
6. How do trainers and assessors maintain their skill levels and experience in a wide range of fuel types and prescribed burning applications?

### **Role requirements for prescribed burning**

7. Does your agency have a system to authorise people to perform certain roles in prescribed burning and does this include requirements additional to completion of the training?
8. To what extent does your agency maintain records of the training, authorisation and skills maintenance of agency personnel?

### **Gaps in the current public safety endorsed units for prescribed burning**

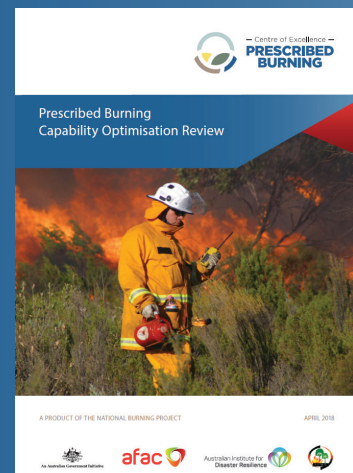
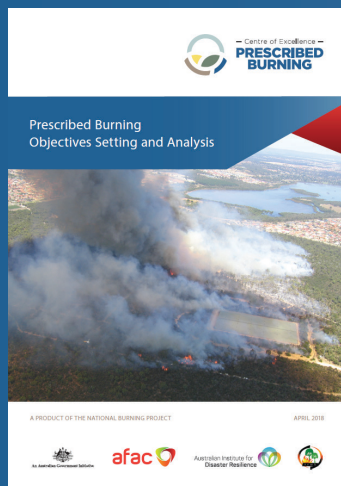
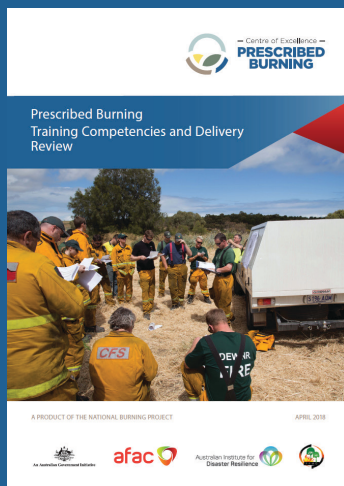
9. Are there gaps in the endorsed units of competency for prescribed burning? For example, are higher level competencies or competencies related to managing specific risks required?
10. Are the endorsed units of competency too broad, too narrow or appropriately pitched?
11. Are the pathways and prerequisites for the current competencies appropriate?
12. How should the competencies relate to prescribed burning roles (refer Excel sheet). Should the competency titles relate to the roles? Or should a cluster of competencies be required for a role?
13. Is the split between the current units for planning and conducting prescribed burns, for both simple and complex burns, working well within your agency context?

Additional questions were also asked regarding future options for an approach to nationally structured training delivery. However, these questions related to Deliverable 2 of the sub-project and agency responses will be address in a separate report.

## APPENDIX B: TECHNICAL REFERENCE GROUP MEMBERS

**Table 42** Technical reference group members

<b>Jurisdiction</b>	<b>Agency</b>
<b>ACT</b>	Parks and Conservation Service
<b>NSW</b>	NSW Rural Fire Service Office of Environment and Heritage
<b>NT</b>	Bushfires NT
<b>NZ</b>	New Zealand Fire Service
<b>QLD</b>	Department of National Parks, Sport and Racing, Queensland Parks and Wildlife Service
<b>SA</b>	Department of Environment, Water and Natural Resources Department of Environment, Water and Natural Resources
<b>TAS</b>	Parks and Wildlife Service
<b>VIC</b>	Department of Environment, Water and Natural Resources Department of Environment, Water and Natural Resources Country Fire Authority
<b>WA</b>	Department of Parks and Wildlife Department of Fire and Emergency Services



## Prescribed Burning Training Competencies and Delivery Review

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