Process Map for Prescribed Burning

END-TO-END STEPS FOR CONSIDERATION DURING
PRESCRIBED BURN PLANNING AND IMPLEMENTATION

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An Australian Government Initiative

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— Centre of Excellence —
PRESCRIBED BURNING

INTRODUCTION

The National Burning Project (NBP) has brought together inter-related aspects of prescribed burning across Australasia to design guiding frameworks and principles for a more holistic and consistent approach to prescribed burning. A number of detailed reports have been produced (as shown on page 11), each of which stands alone, yet with synergies across reports that have been drawn together into a number of easy to use synopses:

- *Process Map of Prescribed Burning (this document)*
- *Best Practice Principles for Prescribed Burning*
- *Risk Management Framework For Prescribed Burning*
- *Objectives, Monitoring and Evaluation Framework for Prescribed Burning*
- *Program Logic for Prescribed Burning*

The synopses are designed to facilitate greater utilisation of the prescribed burning principles by land and fire professionals and aim to improve consistency nationally, and provide orientation to users about the NBP products and how they fit together.

The frameworks produced by the NBP identify four phases of planning and implementing prescribed burning. All of these ready-to-utilise synopses are presented across the four phases of prescribed burning as described below.

Figure 1 | The four phases of prescribed burn planning and implementation

STRATEGIC PLANNING	PROGRAM PLANNING	OPERATIONAL PLANNING	BURN IMPLEMENTATION
Objectives, risk management, consultation and communication			
Long-term planning driving the scale and nature of an agency's prescribed burning program.	Programming the scheduling of burns one to five years ahead.	Advance planning for individual burns usually resulting in a burn plan.	Mobilisation, briefings, test burn, light up, mitigation measures, control strategies, mop-up, patrol and reporting.
=> 5 years	1 – 5 years	Months/year	Days
Jurisdiction, region, property	Jurisdiction, region, property	Individual burn	Individual burn
Research, monitoring, evaluation and reporting			

This *Process map of prescribed burning* contains steps for consideration for prescribed burning from strategic planning through to burn implementation. They reflect the *National Guidelines for Prescribed Burning Strategic and Program Planning* and the *National Guidelines for Prescribed Burning Operations* and have also drawn from the learner resource: *Complex Prescribed Burns*. References to relevant National Burning Project products are provided against each step, so that supporting information can be explored.

This process map contains the steps worthy of consideration for prescribed burning irrespective of who is undertaking it. They are offered to both assist practitioners in their work and to allow organisations to align approaches over time as they update and review their procedures and systems. They are not mandated steps and not all steps will be relevant to all organisations or at all times. They are presented nationally, and therefore cannot reflect all of the local requirements of an organisation or jurisdiction and, although roughly sequential, organisations are likely to undertake steps in different orders.

Although the process map begins with strategic planning level considerations, prior to the strategic planning phase are a range of considerations of which planners must be aware. These include policy and organisational level considerations such as relevant legislation and an organisation's objectives, policies, procedures, guidelines, GIS systems, training and approval processes. Refer to *National Guidelines for Prescribed Burning Strategic and Program Planning* (AFAC 2017) for more information.

STRATEGIC PLANNING PHASE

AWARENESS OF ORGANISATIONAL REQUIREMENTS	Review and maintain awareness of higher-level organisational policies, procedures, guidelines, standards, systems and objectives. Also be aware of legislation that may impact on the strategic planning process. • *National Guidelines for Prescribed Burning Strategic and Program Planning* pages 10, 12, 15 and 21 • *National Position on Prescribed Burning* • *Objectives, Evaluation and Monitoring Framework Synopsis*
DETERMINE PLAN SCALE AND DURATION	Determine the spatial dimensions of the strategic plan and the plan's intended duration. Reflect agency policy and objectives, the distribution of vegetation and risk areas as well as vegetation growth, fuel accumulation, landscape features, fire occurrence cycles and stakeholder needs. • *National Guidelines for Prescribed Burning Strategic and Program Planning* page 32 • *Fuel hazard risk framework* page 18
DETERMINE PLAN TENURES	Strategic planning scope should address how risk reduction is to be optimised and managed across different tenures and administrative boundaries, in partnership with all stakeholders. • *National Guidelines for Prescribed Burning Strategic and Program Planning* page 34 • *National Position on Prescribed Burning*
DETERMINE PLANNING MODEL	The type of strategic planning model, templates or procedures used should reflect area complexity, resourcing capacity, organisational capacity and maturity. • *National Guidelines for Prescribed Burning Strategic and Program Planning* page 36 • *Fuel hazard risk framework* page 22 • *Review of Best Practice for Prescribed Burning* page 30 and 74
DETERMINE VEGETATION TYPES AND REQUIREMENTS	Scope which vegetation types or land areas are suitable for prescribed burning and scope burning regimes. • *National Guidelines for Prescribed Burning Strategic and Program Planning* page 52 • *Ecological risk framework* page 30 - 37
PLAN AND UNDERTAKE COMMUNITY ENGAGEMENT	A stakeholder engagement strategy should be developed and implemented to access valuable local knowledge and stakeholder issues, and to enhance stakeholder ownership, support and commitment to plan implementation. • *National Guidelines for Prescribed Burning Strategic and Program Planning* page 38

DECIDE — **Decide strategic plan scope**

STRATEGIC PLANNING PHASE

IDENTIFY VALUES AND ANALYZE RISKS

Identify values in and near the plan area and determine which values are vulnerable to fire or smoke impacts. Landscape fire risk is highly variable – assess risks to community safety, asset and social/economic infrastructure protection, cultural values, land and natural resource management, and maintenance of ecological resilience.

- *National Guidelines for Prescribed Burning Strategic* page 44
- *Complex Prescribed Burns Learner Resource* page 144 and 35-69
- *Simple Prescribed Burns Learner Resource* page 107 and 29-49
- *Risk management frameworks: fuel (pp. 18-26), smoke (pp. 16-23)*

DETERMINE STRATEGIC PLAN OBJECTIVES

Strategic plans should contain clear objectives linked to performance indicators and metrics, so both delivery and performance can be evaluated. Consider objectives for protection of life and property, bushfire mitigation/fuel management, smoke management, ecological and cultural heritage protection/maintenance and land management.

- *National Guidelines for Prescribed Burning Strategic* page 39
- *Complex Prescribed Burns Learner Resource* page 154 and 29-34
- *Simple Prescribed Burns Learner Resource* page 114 and 23-28
- *Objectives, Evaluation and Monitoring Framework Synopsis*
- *Operations risk framework* Page 22

ANALYZE LANDSCAPE FIRE MOVEMENT

Analyse landscape features, vegetation and fuels and consider historical and potential fire movement. This may be achieved through fire growth simulators or through intuitive understanding. Consider features of the landscape that offer opportunities for bushfire mitigation, last line of defence asset protection and areas that mainly provide ecological maintenance benefits but at the same time enhance bushfire mitigation.

- *National Guidelines for Prescribed Burning Strategic and Program Planning* page 46
- *Fuel hazard risk framework (AFAC 2015)* page 24

APPLY RISK MANAGEMENT SOLUTION AND/OR ZONING

Apply a risk management prioritisation system to the planning area. This may take the form of fire management zones, risk reduction targets or both, as well as other solutions as determined by the strategic planning model. Analyse and identify suitable treatment regimens for different zones, areas and/or vegetation groups.

- *National Guidelines for Prescribed Burning Strategic and Program Planning* page 50
- *Fuel hazard risk framework* page 24 – 26
- *Ecological risk framework* Page 43

HIGHLIGHT SPECIAL RISK MANAGEMENT TREATMENTS

Strategic planning treatments are determined at a landscape, ecosystem or zonal level. Often specific features, assets or species are highlighted for additional risk management consideration and require supplementary action and treatments.

- *National Guidelines for Prescribed Burning Strategic and Program Planning* page 52
- *Operations risk framework* page 33

CONSIDER COMPLEMENTARY STRATEGIES

Fire strategies may form part of broader integrated landscape plans. Be aware of these and to optimise the benefits of prescribed burning strategies, other complementary risk reduction actions (e.g. strategies to encourage shared responsibility with neighbours) need to be identified or reflected.

- *National Guidelines for Prescribed Burning Strategic and Program Planning* page 55

OUTPUT

Draft strategic plan(s) prepared.

PROVIDE GUIDANCE ON IMPLEMENTATION, MONITORING AND EVALUATION

Clear systems and processes should be established for plan implementation, progress monitoring and plan evaluation. These may include burnt unit identification, road works required to support the plan, implementation protocols and monitoring programs. Where possible, articulate these within the strategic plan.

- *National Guidelines for Prescribed Burning Strategic and Program Planning* page 56
- *Ecological risk framework* page 30 - 34

STRATEGIC PLAN PEER REVIEW

Strategic plans cover a wide range of subject matter and also should be operationally relevant. Have the strategic plan peer reviewed by operational and subject matter experts.

- *National Guidelines for Prescribed Burning Strategic and Program Planning* page 57
- *Ecological risk framework* Page 43
- *Operational risk framework* Page 23

STRATEGIC PLAN APPROVAL

Most organisations have formal approval procedures and staff assigned to approve strategic plans. Sometimes approvals from external bodies are required, such as native title groups, government bodies or plan collaborators. Is the strategic plan approved, not approved or requiring review? If requiring review, repeat the above steps as required.

- *National Guidelines for Prescribed Burning Strategic and Program Planning* page 57

OUTPUT

Approved strategic plan(s)

PROGRAM PLANNING PHASE

REVIEW STRATEGIC PLANNING REQUIREMENTS

Review strategic planning requirements but be aware that planning assumptions may have changed by the time program planning is being undertaken.
- *National Guidelines for Prescribed Burning Strategic and Program Planning* page 58
- *Ecological risk framework* Page 44

ANALYSE FIRE HISTORY

Comparing known fire history to requirements or regimes expressed in fire strategies (e.g. within fire management zones, vegetation types or for risk landscapes), provides an initial input for selecting which areas to nominate for a burn program.
- *National Guidelines for Prescribed Burning Strategic and Program Planning* page 60
- *Ecological risk framework* Page 45
- *Fuel risk management framework* page 28

STAKEHOLDER CONSULTATION

Although detailed stakeholder consultation occurs during operational planning, consultation may be continuous through all prescribed burn phases.
- *National Guidelines for Prescribed Burning Strategic and Program Planning page 64*
- *Operational risk management framework* page 26

CONSIDER BURN SEQUENCING

Consider how burn program delivery risk can be reduced by prudent multi-year and/or multi-stage sequencing of burns, to extend from previous burnt areas or to target variable fuels under different weather prescriptions.
- *National Guidelines for Prescribed Burning Strategic and Program Planning* page 65
- *Fuel hazard risk framework* page 29

CONSIDER TIMING REQUIREMENTS

When scheduling burns, consider timing requirements of ecosystems, species and timing considerations that will help protect other values and assets and reduce risks of impacts from fire or smoke. Consider seasons or periods to favour or avoid.
- National Guidelines for Prescribed Burning Strategic and Program Planning page 59
- Ecological risk framework Page 45

CONSIDER OPERATIONAL EFFICIENCIES

Consider opportunities to schedule burns for most efficient use of available resources and plan for contingencies (e.g. programming additional burns to stabilise the burn program in the event of unexpected weather).
- *National Guidelines for Prescribed Burning Strategic and Program Planning Phases* page 59
- *Operations risk management framework* Page 25

CONSIDER SMOKE MANAGEMENT

Consider the cumulative impact of smoke on airsheds, towns and regions. Schedule burns to avoid unnecessary cumulative smoke impacts on sensitive receptors (e.g. hospitals), infrastructure (e.g. major roads) industry (e.g. grape growers) and community events.
- *National Guidelines for Prescribed Burning Strategic and Program Planning* page 71
- *Smoke risk framework* Page 24

MATCH CAPACITY TO COMPLEXITY

Avoid programming burns that are beyond the resources or technical capability of available resources. Be aware of the need to program and share specialist resources and staff. Consider the need to retain contingency resources.
- *National Guidelines for Prescribed Burning Strategic and Program Planning* page 68
- *Operational risk management framework* page 24

PRIORITISE BURNS

It is useful to categorise burns according to complexity, or flag burns that are risky to implement. This highlights them for special planning or approval considerations. It is useful to broadly rank burns in terms of priority to implement, to assist in scheduling burns.
- *National Guidelines for Prescribed Burning Strategic and Program Planning* page 59

OUTPUT — **Draft Burn Program**

CONSULT EXPERTS

Consultation with experts in botany, zoology, cultural heritage or other matters may be required to properly identify values and/or ascertain risk management treatments to protect values. This step is done in detail during operational planning, but in some organisations is considered during program planning.
- *National Guidelines for Prescribed Burning Strategic and Program Planning* page 64

SEEK APPROVALS REQUIRED

Approvals endorsing the burn program may be required both within an organisation and from external bodies such as native title groups or for the EPBC act. Is the burn program approved or does it require review? If requiring review, repeat program planning steps as required.
- *National Guidelines for Prescribed Burning Strategic and Program Planning* page 74
- *Ecological risk framework* Page 43

BURN PROGRAM AWARENESS

Once the burn program is approved, raise community awareness by publishing basic information about the burn program in print media or on the internet. This allows the community to be informed and prepared.
- *National Guidelines for Prescribed Burning Strategic and Program Planning Phases (AFAC 2017)* page 74
- *Operations risk management framework* page 26

OUTPUT — **Approved Burn Program (s). Burn program generally includes a list of burn nominations with maps indicating their location, sometimes with a rough schedule or priorities assigned. Often, a skeletal or draft burn plan is generated, ready to take forward to operational planning stage.**

OPERATIONAL PLANNING PHASE

ALIGNING TO STRATEGIC- AND PROGRAM-LEVEL INTENTS

Are the proposed or anticipated burn characteristics fit for the strategic- and program-level intent for the site?
- *National Guidelines for Prescribed Burning Operations (AFAC 2016) page 15, 25*
- *Complex Prescribed Burns Learner Resource (AFAC 2016) page 141*

UNDERSTANDING THE BURN SITE

Familiarise with tenure, topography, fuels, fire history, vegetation and other features of the burn site.
- *National Guidelines for Prescribed Burning Operations page 12*
- *Complex Prescribed Burns page 143, 87-96*
- *Simple Prescribed Burns page 106, 63–72*
- *Fuel hazard risk framework Page 33 - 41*

OPERATIONAL FEASIBILITY

Can the burn objectives be met while safely containing the burn? Is the ecosystem in a condition suitable for burning?
- *National guidelines for Prescribed Burning Operations page 26*
- *Ecological risk framework page 35*
- *Complex Prescribed Burns Learner Resource page 142 and page 72*
- *Simple Prescribed Burns Learner Resource page 105*

BURN CONSULTATION

Early consultation with experts and stakeholders can reveal additional values, hazards, risks, opportunities and access considerations.
- *National guidelines for Prescribed Burning Operations page 32*
- *Complex Prescribed Burns Learner Resource page 148*
- *Simple Prescribed Burns Learner Resource page 108*
- *Operations risk framework Page 43 and 48*

IDENTIFY VALUES, RISKS AND HAZARDS

Identify values (including desktop and field assessment), and assess if any values require treatment to attenuate their risk exposure to acceptable levels. Be aware of legislative requirements (e.g. EPBC Act) and note that some jurisdictions require formal environmental impact assessments. The outcomes of such assessments will need to be taken into account.
- *National guidelines for Prescribed Burning Operations page 28*
- *Complex Prescribed Burns Learner Resource page 144 and 35-69*
- *Simple Prescribed Burns Learner Resource page 107 and 29-49*
- *Risk Frameworks: Operations (48), Fuel (38), Ecological (52), Smoke (24)*

DECISION

Is the burn still needed? Is it feasible? Decide which risks require control measures to take forward.

PREDICTING DESIRED FIRE BEHAVIOUR

Make a range of fire behaviour predictions that take account of variability of vegetation types, fuel characteristics, topography, and any staging and timing requirements.
- *National Guidelines for Prescribed Burning Operations page 34*
- *Complex Prescribed Burns Learner Resource page 153 and 109*
- *Simple Prescribed Burns Learner Resource page 113 and 83*
- *Fuel Hazard Risk Framework page 32*

IDENTIFYING/REFINING MEASURABLE OBJECTIVES

Ensure that burn objectives are unambiguous, realistic, measurable and testable. Align objectives to strategic intents.
- *Complex Prescribed Burns Learner Resource page 154 and 29-34*
- *Simple Prescribed Burns Learner Resource page 114 and 23-28*
- *Objectives, Evaluation and Monitoring Framework Synopsis*

IDENTIFYING/ REFINING PRESCRIPTIONS/ CONSTRAINS

Prescribe weather and fuel moisture conditions/limits/ranges that will allow objectives to be achieved, safely contain the burn and allow flexibility for burn operators. Many organisations have standard burn prescriptions.
- *Complex Prescribed Burns, Learner Resource page 155 and pages 29-35*
- *Simple Prescribed Burns Learner Resource page 115 and page 78*
- *Risk Frameworks: Operations (29), Ecological (54)*

PLANNING RISK CONTROLS

Some asset, natural and cultural values will require specific mitigation strategies to attenuate their risks to acceptable levels. Also consider safety issues such as safety zones, escape routes and contingency planning.
- *National Guidelines for Prescribed Burning Operations page 35*
- *Complex Prescribed Burns Learner Resource page 158 and 35-69*
- *Simple Prescribed Burns Learner Resource page 117 and 29-54*
- *Risk management frameworks: smoke (24-29), ecological (52-55) and operations (37, 43, 49)*

PLANNING CONSULTATIONS, NOTIFICATIONS AND WARNINGS	Include a list of stakeholders to streamline notifications for use on the days prior to and on the day of burn. Plan any non-standard signage or warnings required. Some situations (especially in peri-urban areas) may require detailed community engagement planning/plans. • *National Guidelines for Prescribed Burning Operations* page 35 • *Complex Prescribed Burns Learner Resource* page 160 • *Simple Prescribed Burns Learner Resource* page 119, *Smoke risk framework* • *Operations risk framework* Page 43
PLANNING BURN EXECUTION OPTIONS	Plan ignition strategies, but allow flexibility for operators to adjust to conditions on the day. • *National Guidelines for Prescribed Burning Operations* page 34 • *Complex Prescribed Burns Learner Resource page 161 and* pages 117-135 • *Simple Prescribed Burns Learner Resource* page 120 and pages 91-100 • *Risk management frameworks: fuel (33), smoke (24-29), ecological (54-55) and operations (49)*
PLANNING MANAGEMENT OF PUBLIC	It is often necessary to plan for traffic-management, and sometimes management of public or media that may be present. • *Complex Prescribed Burns Learner Resource* page 155, *Operational risk framework* page 43
PLANNING RESOURCES	Plan resources needed to prepare for, conduct, patrol, manage and monitor the burn. Plan for any specialised or standby contingency resources required. • *National Guidelines for Prescribed Burning Operations* page 35 • *Complex Prescribed Burns Learner Resource* page 163 • *Simple Prescribed Burns Learner Resource* page 122 • *Assist with Prescribed Burns* Page 63-95 • *Operational risk framework* Page 38
PLANNING POST-FIRE WORK	Consider pre-planned methods for post-fire assessment of burns and any pre-planned site rehabilitation works. • *Complex Prescribed Burns Learner Resource* page 164
PREPARING MAP	Prepare/attach map(s) suitable to support burn preparation and implementation. • *National Guidelines for Prescribed Burning Operations* page 37 • *Complex Prescribed Burns Learner Resource* page 164 • *Simple Prescribed Burns Learner Resource* page 122
OUTPUT	**A draft burn plan. Use your organisation's templates where available (or see Complex Prescribed Burns page 253 or Simple Prescribed Burns Page 194 for basic templates).**

PREPARING FOR APPROVAL	Burn plans need to be assembled, checked and (preferably) peer reviewed before submission for endorsement and approval. Be aware of requirements of legislation, policy, organisational doctrine and expert recommendations. • *Complex Prescribed Burns* Learner Resource page 171 • *Simple Prescribed Burns* Learner Resource page 123
BURN PLAN PEER REVIEW	The person planning the burn often becomes overly familiar with the subject. Have the burn plan peer reviewed by operational and subject matter experts. • *Complex Prescribed Burns* Learner Resource page 171 • *Simple Prescribed Burns* Learner Resource page 123
BURN PLAN APPROVAL	Most organisations have formal approval procedures (and sometimes checklists), and particular staff to approve burn plans. Approval of the burn plan is usually not the same as approval to ignite the burn. Approvals from external bodies may be required. Is the burn plan approved, not approved or requiring review? If requiring review, refer to above steps as required. • *Complex Prescribed Burns* Learner Resource page 172 • *Simple Prescribed Burns* Learner Resource page 123
OUTPUT	**An approved burn plan.**

BURN IMPLEMENTATION PHASE

REVIEWING BURN PLANS

The person in charge of conducting the burn should validate that the burn plan is sound and/or that they are comfortable to carry out the burn given their experience level.
- *Complex Prescribed Burns* Learner Resource (AFAC 2016) page 181
- *Simple Prescribed Burns* Learner Resource (AFAC 2016) page 134

ADVANCE PREPARATIONS

Undertaking burn site preparations well in advance will enable burning opportunities to be taken when they arise and will contribute to sound risk management. Complete boundary, site, risk-management and other works in advance of the burn.
- *National Guidelines for Prescribed Burning Operations* page 38
- *Complex Prescribed Burns* page 182
- *Simple Prescribed Burns* page 135

MONITOR APPROACHING WINDOWS OF OPPORTUNITY

Foresee burning opportunities and be ready – monitor weather patterns and landscape/fuel drying indicators to determine when suitable burning conditions are approaching.
- *National Guidelines for Prescribed Burning Operations* page 39
- *Complex Prescribed Burns* page 184
- *Simple Prescribed Burns* page 136

ADVANCE PUBLIC NOTIFICATIONS

Public notification of intention to burn often occurs via signage, media, and the internet and as the day of burn approaches, text messaging systems or letter box drops.
- *National guidelines for Prescribed Burning Operations* page 38
- *Complex Prescribed Burns Learner Resource* page 187
- *Operations risk framework* page 43

NOTIFYING AND PREPARING RESOURCES

Early notification of the person in charge of conducting the burn and crews as soon as favourable conditions are identified will help ensure that resources are available and ready. Remember to give early notification to specialised staff or resources (e.g. aerial) and to notify any contingency resources.
- *National guidelines for Prescribed Burning Operations* page 43
- *Complex Prescribed Burns* Learner Resource page 188

AUTHORISE BURN DAY

Gain consent for the scheduled burn date by an authorised person (if required). Authorisation is to ensure resources will be available to undertake the burn on the day proposed.
- *Simple Prescribed Burns Learner Resource* page 140
- *Complex Prescribed Burns Learner Resource* page 188

DECISION

Decide when site preparation, forecasts and site conditions are coming into alignment for prescribed burning.

OBTAIN WEATHER INFORMATION

Base your decision to proceed on good forecast and smoke dispersal information for your area for current and subsequent days.
- *National Guidelines for Prescribed Burning Operations* page 42
- *Complex Prescribed Burns Learner Resource* page 191
- *Simple Prescribed Burns Learner Resource* page 143
- *Risk framework for operations* Page 29

MOBILISE RESOURCES

Confirm roles for the burn and arrange an assembly point location and time for a briefing.
- *National Guidelines for Prescribed Burning Operations* page 43
- *Complex Prescribed Burns* page 192
- *Simple Prescribed Burns* page 144
- *Operations Risk Framework* Page 38 - 41

SAFETY CHECKS AND BRIEFINGS

Use SMEACS or similar format and the burn plan as the basis for an operational briefing. Allow time to cover all necessary information, questions and clarifications. Conduct site safety checks and check PPE and equipment is in order.
- *National Guidelines for Prescribed Burning Operations* page 43
- *Complex Prescribed Burns* page 193-194, 45 - 48
- *Simple Prescribed Burns* page 144 – 145, 35 - 36
- *Operational Risk Framework* pages 38-41

IGNITION TIMING AND APPROVAL

Burn timing and ignition location should be based on well-considered knowledge of current and future fuel and weather conditions at the burn site – monitor site fuel and diurnal weather pattern development on the day of the burn to determine suitable location, conditions and timing for ignition. Seek ignition approval if appropriate.
- *National guidelines for Prescribed Burning Operations* page 44
- *Complex Prescribed Burns Learner Resource* page 194
- *Simple Prescribed Burns* page 146
- *Operational Risk Framework* page 34

DECISION

Is burn ignition approved or not approved? If not approved, are changes to resources, timing or ignition patterns required or should the burn be postponed?

PUBLIC SAFETY

Implement public-safety measures such as day of burn notifications, restricting site access, placing warning/advisory signage, ensuring members of the public are clear of the burn site, managing bystanders or media and implementing traffic control.

- *National Guidelines for Prescribed Burning Operations* page 48
- *Complex Prescribed Burns* Learner Resource (AFAC 2016) page 199
- *Simple Prescribed Burns* Learner Resource (AFAC 2016) page 134
- *Operational Risk Framework* pages 44 - 46

TEST BURN

A test burn can be a valuable aid in confirming fire behaviour predictions and intuitions, and ensuring that the actual fire behaviour will be within prescriptions or acceptable limits.

- *National Guidelines for Prescribed Burning Operations* page 46
- *Complex Prescribed Burns* page 200
- *Simple Prescribed Burns* page 151
- *Operational Risk Framework* page 34

LIGHTING, MONITORING AND CONTAINING THE BURN

It is important to apply good discipline in executing lighting and containment operations while retaining the flexibility to modify pre-planned techniques where conditions vary. Keep in mind the desired fire behaviour and monitor and adjust lighting as necessary to safely achieve objectives.

- *National Guidelines for Prescribed Burning Operations* page 47
- *Complex Prescribed Burns* page 202 and 79-86
- *Simple Prescribed Burns* page 153 and 55–62
- *Operational* page 34 and 50*, Fuel risk* page 42

DEMOBILISING OR ESCALATING RESOURCES

Maintain awareness of events or conditions (such as spot-overs or unexpected fire behaviour) that may trigger initiation of contingency actions. Decisions about escalating or demobilising resources will be required after well-considered assessment of fire behaviour potential and level of risk to burn security and public safety.

- *National guidelines for Prescribed Burning Operations* page 50
- *Complex Prescribed Burns Learner Resource* page 204
- *Simple Prescribed Burns* page 155
- *Operational Risk Management Framework* page 35

SECURING THE BURN SITE

Once burn objectives have been achieved, mopping-up/blacking-out work should commence on perimeters, in order to secure the boundaries. Whilst any fuels remain alight the possibility exists for escapes and patrol measures must be taken to minimise this risk. Review site safety (such as dangerous trees) prior to allowing people to re-enter the burn area.

- *National guidelines for Prescribed Burning Operations* page 50
- *Complex Prescribed Burns Learner Resource* page 204
- *Simple Prescribed Burns* page 155
- *Operational Risk Management Framework* page 35

DECISION

Decide if the burn site is safe and whether crews can be stood down. Decide if there is a need for ongoing monitoring/patrol of the burn.

BURN IMPLEMENTATION PHASE

EVALUATIONS

Evaluate the success of burn objectives and map the extent of the burn. Well stated measurable objectives can often be tested with simple visual techniques at representative locations soon after the burn, however sometimes more complex techniques or longer time periods are required.

- *National Guidelines for Prescribed Burning Operations* page 52
- *Complex Prescribed Burns* Learner Resource page 209
- *Simple Prescribed Burns* Learner Resource page 159
- *Ecological Risk Framework* page 59
- *Objectives and monitoring synopsis*

POST BURN WORKS

During the burn, there may have been construction of temporary control lines, turn-around areas, safety zones, or damage to fences, signage or unplanned encroachment of fire into sensitive areas. These may require action to repair or rehabilitate. Action can be taken immediately after the fire or planned for later implementation.

- *Complex Prescribed Burns* page 210
- *Simple Prescribed Burns* page 160

DEBRIEFINGS

All people involved in a prescribed burn should be debriefed. This is best done near the end of the operation or day of burning when most crews are still present. However because some crews may be committed to patrol until late in the day (or overnight) more than one debriefing may be necessary.

- *National Guidelines for Prescribed Burning Operations* page 52
- *Complex Prescribed Burns* page 211 and 82
- *Simple Prescribed Burns* page 160 and 58
- *Operational Risk Framework* pages 38-41

REPORTING AND FEEDBACK

Document post-fire assessments and make them available to burn planners and burn operators. This will aid in adaptive management and continuous learning processes. Recorded outcomes of burning may feed into reporting processes that help with assessment of state- or organisation-wide objectives and performance measures. Determine whether the objectives were achieved. If objectives were not achieved, decide whether the burn should be re-attempted/rescheduled.
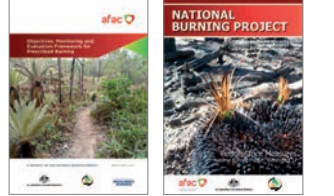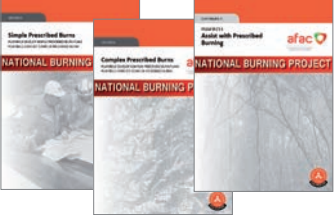
- *National guidelines for Prescribed Burning Operations* page 44
- *Complex Prescribed Burns Learner Resource* page 212
- *Objectives and monitoring synopsis*

OUTPUT

Completed fire report

NATIONAL BURNING PROJECT

The National Burning Project was jointly commissioned by the Australasian Fire and Emergency Service Authorities Council (AFAC) and the Forest Fire Management Group (FFMG) and has produced a range of products as shown below.

SYNOPSES

A great resource summarising the guidelines and frameworks developed by the National Burning Project as simple and ready-to-use brochures.

NATIONAL POSITION

The National Position articulates a nationally agreed position on prescribed burning and establishes principles for the development and implementation of prescribed burning policies and programs.

AN APPROACH TO OBJECTIVES SETTING

A tool for clearer identification of costs and benefits when analysing competing objectives in planning for prescribed burning.

BEST PRACTICE GUIDELINES

Strategic   Operations

The frameworks and principles identified in these documents will be valuable to practitioners, planners and land managers with an interest in planning or undertaking prescribed burning in the best possible way.

RISK FRAMEWORKS

Operations and safety   Smoke and GHG   Fuel hazard   Ecological

These reports build and present frameworks that can be adopted by practitioners and agencies to facilitate improved approaches and greater appreciation of risks associated with undertaking prescribed burning.

MEASURING PERFORMANCE

Objectives & monitoring   Performance measures

A framework and set of performance measures for evaluating prescribed burning against desired objectives.

BEST PRACTICE SYNOPSES

Process map
Step-by-step best practice guide for prescribed burning, from strategic planning through to burning implementation.

Best practice principles
Best practice principles for prescribed burning summarised into a ready-to-use synopsis for the benefit of prescribed burning professionals.

RISK MANAGEMENT SYNOPSIS

The risk management framework for prescribed burning summarised into a ready-to-use synopsis for the benefit of prescribed burning professionals.

PROGRAM LOGIC

Diagrammatic summary of the rationale behind prescribed burning.

TRAINING MANUALS

These learner resources provide instruction and theory that can be used by students or by instructors for lesson planning.

• Assist with prescribed burning
• Simple prescribed burns
• Complex prescribed burns

TOOLBOX

The National Tool Box is a repository of existing decision support tools that can aid in prescribed burning.

OVERVIEW

This report is a very useful introduction and overview of prescribed burning in Australasia and the evidence base that underpins the use of planned fire.

BEST PRACTICE REVIEW

This report provides a detailed account of the prescribed burning practices that are considered to be examples of best practice.

SCIENCE REVIEW

Reviewing science, practical and Traditional Owner knowledge around the use of prescribed burning as a land management tool.

CAPABILITY REVIEWS

Training   Resources

A review of prescribed burn training and resource capability to aid in improving training and resource sharing outcomes.

BEST PRACTICE PRESCRIBED BURNING SYNOPSES:

- *Process Map of Prescribed Burning (this document)*
- *Best Practice Principles for Prescribed Burning*
- *Risk Management Framework for Prescribed Burning*
- *Objectives, Monitoring and Evaluation Framework For Prescribed Burning*
- *Program Logic for Prescribed Burning*

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Department of Environment, Water and Natural Resources, South Australia

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