Queensland Bushfire Plan

PREPARED BY
Queensland Fire and Emergency Services

Queensland Government

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Commissioner's Foreword

Recent years have provided all Queenslanders with an insight into the dynamic nature of bushfires, their complexities and the impact they can have on communities.

Managing bushfires relies on local action supported through Queensland's disaster management arrangements. Achieving a co-ordinated effort that produces meaningful outcomes requires a clear understanding of our approach to manage bushfire. This is achieved through this plan – the Queensland Bushfire Plan.

This plan outlines Queensland's arrangements for managing bushfire across prevention, preparedness, response and recovery. It is a sub-plan to the Queensland State Disaster Management Plan and highlights the important link between the management of bushfire and Queensland's disaster management arrangements.

Our most recent bushfire seasons have resulted in Queensland experiencing periods of 'catastrophic' fire danger, with fires occurring in unfamiliar locations such as rainforests and simultaneously across multiple areas of our vast state. The size and intensity of many of these fires were extraordinary in Queensland.

The climatic conditions that contributed to an extended bushfire season in 2019 also provides us a vision of the future. As our climatic conditions continue to change, we can expect the bushfire season to extend over a longer period, with the season starting earlier and finishing later and the frequency and intensity of fires to increase. It is likely that Queensland will experience this type of bushfire season again and it is a challenge we will need to face together.

Managing these challenges requires a co-ordinated effort to enable the safety of all Queenslanders. As the primary agency for bushfire in Queensland, Queensland Fire and Emergency Services works in partnership with the Queensland community and partner agencies, with an emphasis on consultation and collaboration, supported by a legislative and policy framework.

By working together with communities, other Government agencies and stakeholders in the public and private sectors, we are enabled to effectively manage our bushfire hazard. It is our shared responsibility to undertake those activities, which helps us to reduce the impact of bushfire and prepare our communities to respond and recover.

I commend the plan to all Queenslanders.

Greg Leach Commissioner
Queensland Fire and Emergency Services

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Authorisation

The Queensland State Disaster Management Plan, as approved by the Queensland Disaster Management Committee requires the development of plans to address specific hazards. Bushfire is identified as a hazard requiring a specific plan.

Queensland Fire and Emergency Services is the primary agency for bushfire in Queensland and is responsible for developing the Queensland Bushfire Plan.

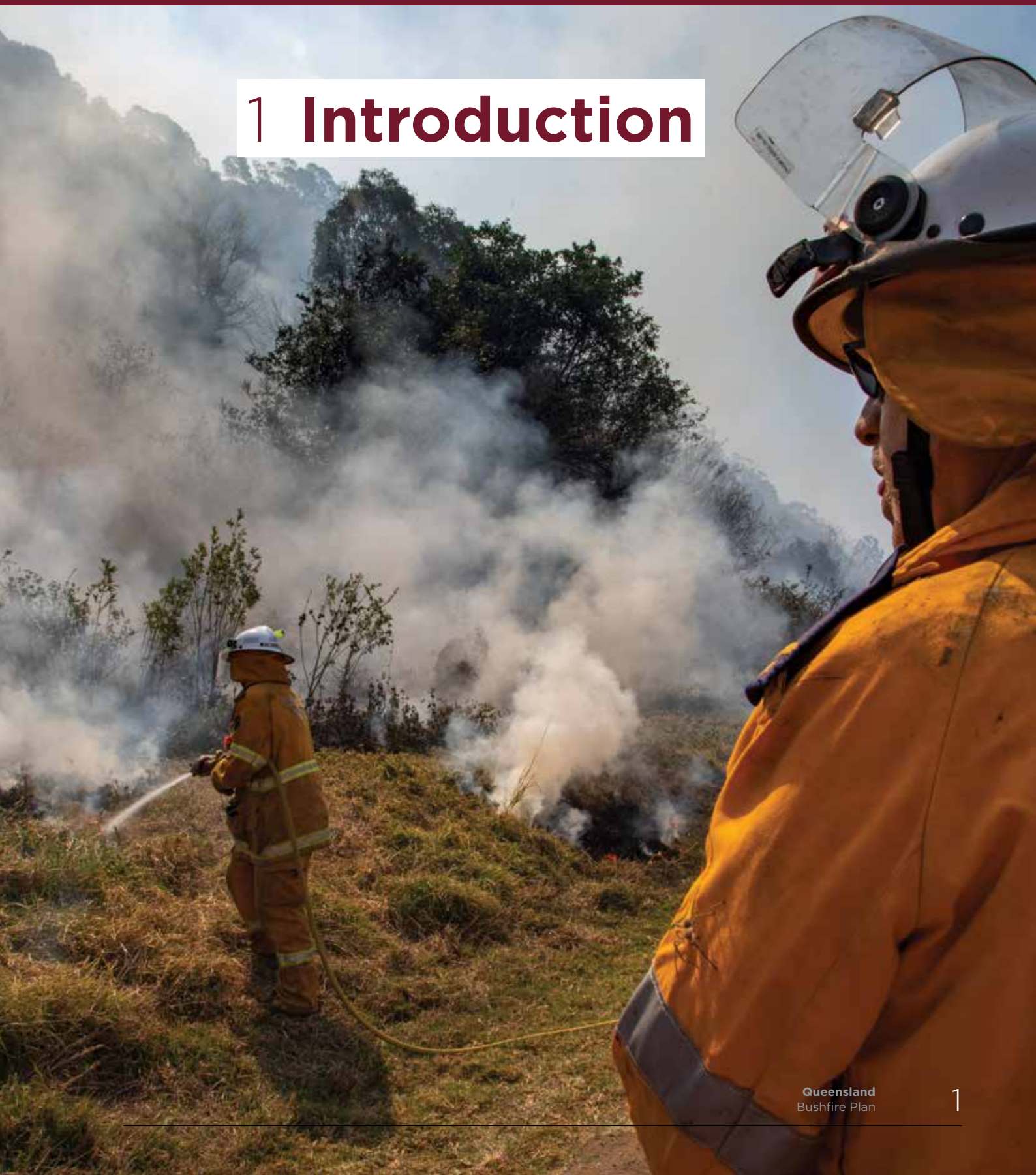
This plan is approved as the bushfire hazard specific plan for the state of Queensland.

This plan is issued under the Authority of the Commissioner, Queensland Fire and Emergency Services.

Greg Leach Commissioner
Queensland Fire and Emergency Services

Date 27/07/2020

1 Introduction



1.1 Aim

The aim of the Queensland Bushfire Plan (the Plan) is to enable Queensland's management of bushfire hazard through prevention, preparedness, response and recovery.

1.2 Objectives

The objectives of the Plan are to:

- Outline the principles of bushfire management in Queensland
- Describe the roles and responsibilities of bushfire management stakeholders
- Outline Queensland's arrangements for the management of bushfire through prevention, preparedness, response and recovery.

1.3 Scope and Application

- The Plan is designed to provide guidance to Queensland stakeholders in relation to the management of bushfire. These stakeholders include the Queensland community, land managers, government at both the local and state level, essential service providers, non-government and not-for-profit organisations.
- The Plan outlines Queensland's arrangements for bushfire management across four phases aligned to the state's comprehensive approach to disaster management: prevention, preparedness, response and recovery. A key emphasis of the Plan is the concept of shared responsibility – all stakeholders have an important role to play in the management of bushfire in Queensland.
- The Plan is a sub-plan to the Queensland State Disaster Management Plan (QSDMP). As such in any circumstance where this plan does not explicitly provide guidance to stakeholders, reference should be made to the QSDMP. The Plan must be read in conjunction with the QSDMP.
- Queensland Fire and Emergency Services (QFES) is the primary agency for bushfire and is responsible for developing and maintaining the Plan on behalf of the Queensland Disaster Management Committee (QDMC).

1.4 Out of Scope

- While out of scope for this version of the Plan, commentary concerning (but not limited to) the items outlined below, will be included in future versions:
  - The use of Indigenous burning practices (refer to page 6 for further commentary)
  - Outcomes of contemporary research on matters such as the impact of climate change on future bushfire risk
  - Other matters which contribute to effective bushfire management in Queensland.

1.5 Principles

Queensland's approach to bushfire is underpinned by three key principles:

HAZARD MITIGATION

- Hazard mitigation enables Queensland to manage the risk of bushfire. Mitigation undertaken in an informed, planned and coordinated manner can play a crucial role in influencing the potential for ignition, frequency and intensity of bushfires and their impacts upon communities. Mitigation options vary according to location and seasonality and will be informed by knowledge of fire ecology and fire behaviour.
- A key driver of hazard mitigation is understanding the bushfire risk, which will be informed through a structured process of risk assessment to identify elements of exposure and vulnerabilities within communities.
- Communities that understand their risk can make informed decisions regarding the most appropriate hazard mitigation strategy/s for their location.
- Achieving effective hazard mitigation is a shared responsibility and will be a sustained focus for the Queensland community.

PUBLIC SAFETY

- Public safety underpins Queensland's approach to managing the bushfire hazard. The primary aim of public safety is the protection and preservation of human life. Our public safety strategies are implemented across all four phases (prevention, preparedness, response and recovery) but are a key focus during the response phase. To support efforts during response, the provision of public information is essential to enable the Queensland community to understand their risk to bushfire, prepare their properties and make informed decisions to enable their safety during a bushfire.

COLLABORATION AND COORDINATION

- Managing the bushfire hazard in Queensland occurs across all phases of disaster management – prevention, preparedness, response and recovery. It involves a wide range of stakeholders, whose collective effort will produce positive outcomes for the Queensland community.
- The collective effort is underpinned by coordination, which is enabled through Queensland's bushfire management arrangements, outlined in Chapter 2 – Governance. These arrangements support the development of strategies, plans, tactics and operations for managing bushfire.

The principles outlined in the QSDMP also underpin bushfire management in Queensland and should be read in conjunction with this plan.

1.6 Queensland Bushfire Priorities

The Plan identifies four priorities for the effective management of bushfire in Queensland.
These priorities are:

1 Primacy of life – firefighters, emergency services and community

2 Provision of public information and warnings

3 Protection of critical infrastructure, community assets and areas of natural and cultural value

4 Conservation of the environment.

1.7 Bushfire Risk in Queensland

1.7.1 Bushfire Hazard Definition

A bushfire is a fire involving grass, scrub or forest. A bushfire can cause injury, loss of life and/or damage property or the natural environment.

1.7.2 Drivers of Bushfire Risk

Bushfires are a natural part of the Australian environment, but the level of bushfire risk and the timing of the bushfire season varies from region to region and from year to year.

The primary drivers of bushfire behaviour are fuel, topography and weather. The topography of the landscape significantly influences bushfire behaviour, particularly where the landscape includes a slope greater than 10%. Bushfires also require a source of ignition; this can occur naturally i.e. through a dry lightning strike or can result from human action, malicious or otherwise.

Fires can burn more intensely with abundant and drier fuel. Extended hot and dry periods, such as heatwaves and/or droughts, can lead to an increase in dry and

highly flammable fuel loads making fires easy to start and harder to control.

Patterns of land use and population growth influence bushfire risk. As the population grows, so does the urban footprint resulting in more people residing in the urban/rural interface zone.

Weather conditions that lead to significantly elevated bushfire risk include a combination of high temperatures, low humidity and strong winds. This type of 'fire weather' can be identified and measured using the Forest Fire Danger Index (FFDI). Heat and dryness are two of the biggest drivers of the weather-related components of bushfire risk. The drier and hotter the weather, the less bushfires require, from a thermodynamic perspective, to spread faster and become increasingly dangerous.

1.7.3 **Climate Change**

Climate change does not directly cause bushfires but does exacerbate conditions that lead to greater bushfire risk. In future years, climate change is expected to result in more severe fire weather days, more intense fires and decreased opportunities to rely on fire conditions easing overnight in Queensland.

Higher temperatures and longer dry seasons will increase bushfire risk in some regions, particularly for communities where houses and businesses neighbour natural ecosystems. New projections of FFDI show a future change towards more severe conditions throughout Queensland. *[Source – Bureau of Meteorology (2019) Changes to Fire Weather in Queensland].*

Severe to extreme heat, heatwaves and drought conditions increase the risk of severe fires. Reports from the Bureau of Meteorology and CSIRO indicate the changing climate has already produced a general lengthening of the fire season, increasing fire danger across Australia. As outlined within the State Heatwave Risk Assessment 2019, Queensland is projected to get increasingly hotter, with increases in mean daily maximum and mean overnight maximum temperatures. Parts of Queensland are also expected to become significantly drier.

A projected increase in the frequency of compounding extremes, such as severe weather events i.e. extreme rainfall events, storms and cyclones with destructive winds and hail can add to background bushfire risk, especially in areas with increased fuels loads. Forests that are impacted by severe winds, including cyclonic and non-cyclonic winds, can result in significant increases in surface fuels from leaf and branch fall. This in turn means fires in these areas are more likely to burn for longer (due to coarse fuels burning more slowly) and possibly more intensely. The reduced canopy in damaged areas, and the potential for climate-induced changes to vegetation types, may also mean greater wind penetration and drier fuel that could result in more intense fires that spread more quickly.

Extreme rainfall events that are followed by prolonged dry periods can significantly increase bushfire risk to severe or extreme across multiple regions of Queensland, which may traditionally experience low to medium bushfire risk. The early 2019 monsoon trough event and associated floods resulted in significant vegetation growth across vast areas of Queensland. This vegetation greatly increased general fuel loads due to the onset of a prolonged and particularly harsh dry season, coupled with reduced risk mitigation opportunities. Events of this nature also increase the incursion of introduced flora to various areas, resulting in changes to fuel type and loads. While general precipitation is projected to decrease in most regions under climate change, these extreme rainfall events are projected to increase in frequency, duration and intensity.

Resources are available to help all bushfire management stakeholders and the community to understand the implications of climate change on bushfire risk into the future. For example, high-resolution climate projection data is available via the **Queensland Future Climate Dashboard**[1], and detailed information on extreme heat events is available in the **State Heatwave Risk Assessment 2019**[2].

The current and evolving bushfire risk in Queensland highlights some main conclusions and future challenges, including:

- Accelerating changes in weather, resulting from climate change and the subsequent changes to fuels, means that bushfire is becoming one of the primary natural risk drivers in Queensland
- Queensland is becoming hotter and drier, with a growing number of days per year likely to reach or exceed very high fire danger
- Bushfire seasons starting earlier, resulting in a longer season
- The frequency, duration and severity of heatwaves and droughts is projected to increase significantly
- These conditions will continue to significantly affect fuel types and loads in Queensland. Forest areas are likely to see more frequent, larger and intense fires.

Wet forest areas which previously experienced little fire activity are more likely to experience bushfire in the future

- Fires may occur with increased frequency and intensity creating a more hazardous working environment for firefighters
- As the expected impacts of climate change increase overall bushfire risk in Queensland, land management strategies aimed at bushfire prevention will become increasingly important but equally as constrained, as will optimised prevention and planning measures, and appropriate response capabilities
- There is an important role for further research to understand how and where climate change is likely to elevate bushfire risk, and to identify appropriate adaptation strategies for emergency services and the communities they serve
- More of Queensland's population is choosing to reside in environments characterised by bushland. As a result, more members of our community are exposed to the hazard of bushfire
- Queensland's changing climate may result in concurrent activations for bushfire and heatwave, requiring a heightened need for coordination across Queensland's disaster management arrangements. The arrangements for heatwave are outlined in the **Heatwave Management Sub-Plan**[3].

1.7.4 Queensland Bushfire Risk Statement

The Queensland State Natural Hazard Risk Assessment 2017 identifies bushfire risk as Queensland's fourth priority in terms of natural hazards likely to impact Queensland. Since publication of the assessment, Queensland has experienced changes in weather and fuel loads, resulting in an elevated bushfire risk.

The impacts that may be currently expected, and which may intensify with the projected increase in frequency, intensity and duration of bushfires, will be explored in greater detail in planned future assessments of the hazard and risk.

The impacts of severe and extreme bushfires are likely to affect all sectors of Queensland's communities, from the public to government organisations and industries, health, utilities, commerce, agriculture, and infrastructure. The severity of impact is reflective of the effectiveness of seasonal hazard mitigation and risk management strategies that are in place within the affected area.

There are key area interface zones (I-Zones) where natural bushland interacts with urban areas that creates a vulnerability to people, domestic dwellings and industrial areas. These I-Zones are a priority area for QFES and Local Disaster Management Groups (LDMGs).

Bushfires may also impact communities through exposed elements. These elements are:

- Essential infrastructure
- Access and resupply
- Community and social
- Medical, public and mental health
- Significant industries
- Environmental.

Detailed information concerning the bushfire risk in Queensland is contained in Appendix A.

1.8 Indigenous Burning Practices

Indigenous burning practices are used for cultural, hazard mitigation and conservation purposes. Cultural burning is used to support the health of the land through regeneration, hazard mitigation reduces fuel to prevent intense bushfire, and conservation burning is used to promote biodiversity. These approaches will not stop bushfires but may lessen their severity.

In Queensland, indigenous burning practices are being incorporated into bushfire management where appropriate. Further iterations of the Plan will provide guidance in relation to indigenous burning practices as the research is refined.

2 Governance

2.1 Queensland's Bushfire Management Arrangements

Queensland's bushfire management arrangements are characterised by partnerships and shared responsibility between land managers, the community, service providers, fire management groups, disaster management groups (DMGs), committees at a regional and state level and government at the local, state and Commonwealth level. These arrangements are shown on page 9 at Figure 1.

Our partnerships and shared responsibility are underpinned by principles which are drawn from the **Good Neighbour Policy**[4] developed by the Queensland Parks and Wildlife Service:

- Understanding and recognition of rights and responsibilities of all land managers
- The development and maintenance of open, respectful and positive relationships
- Communication
- Consultation
- Cooperation
- Recognition that effective bushfire management is applied across boundaries.

The intention is to enable a coordinated, risk-based approach to the management of bushfire throughout the state and facilitate linkages to Queensland's disaster management arrangements.

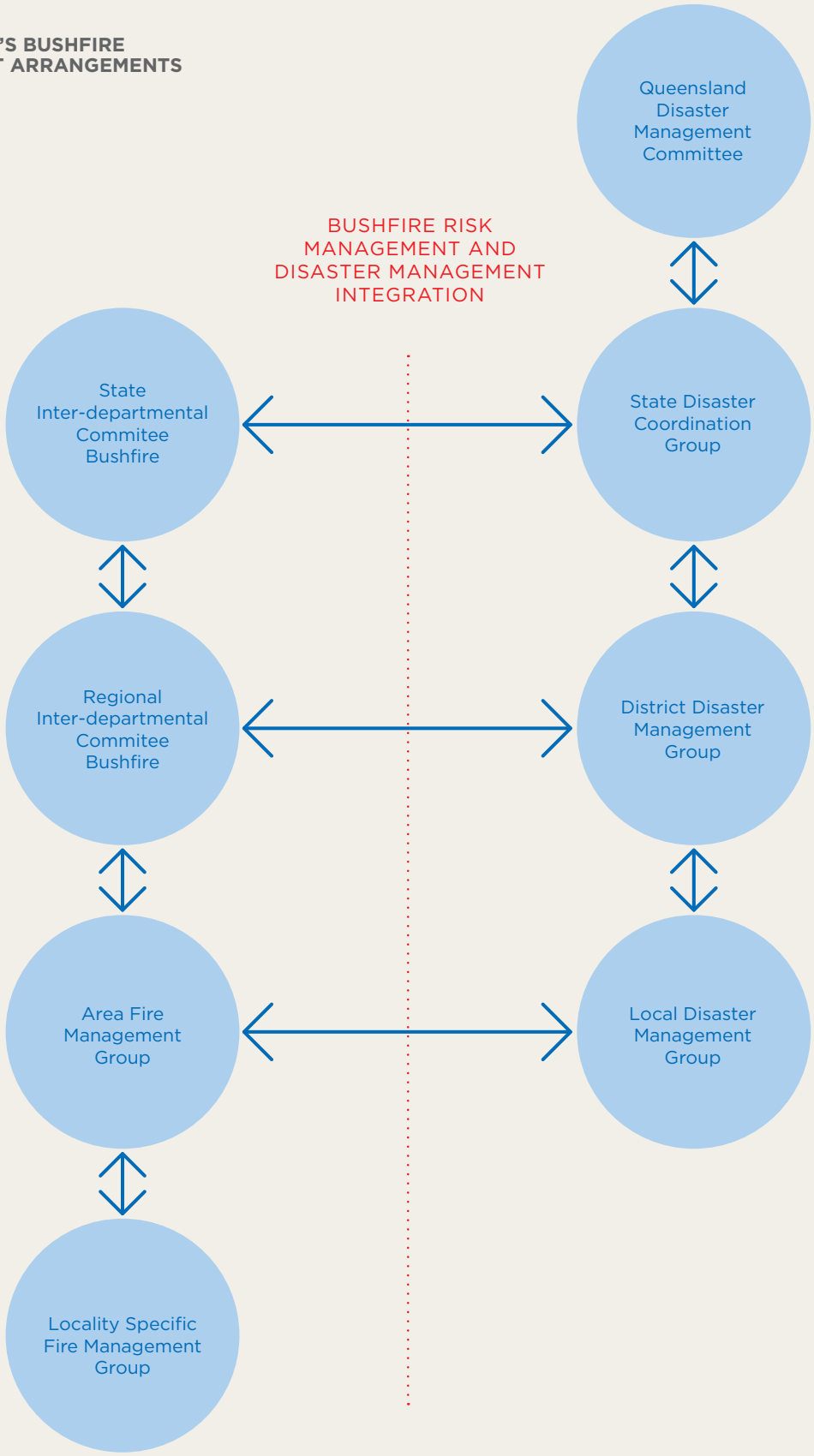
Under the auspice of this plan, the Good Neighbour Policy, will be further reviewed to guide stakeholder relationships across the bushfire management spectrum.

2.1.1 Bushfire Management Groups

Queensland's bushfire management arrangements are coordinated by groups at the area, regional and state level. These groups provide support to DMGs and land managers to manage the bushfire risk. This support is reflected in the functions of these groups as outlined below. The Plan establishes these groups.

The state is comprised of Locality Specific Fire Management Groups (LSFMG), Area Fire Management Groups (AFMGs) and seven Regional Inter-departmental Committees Bushfire (RIDCB). These groups report to the State Inter-departmental Committee Bushfire (SIDCB).

FIGURE 1:
QUEENSLAND'S BUSHFIRE MANAGEMENT ARRANGEMENTS



All fire management groups have the following functions:

- Identification and consensus on areas of particular bushfire risk
- Provision of advice on fuel reduction and other mitigation activities
- Fostering effective and harmonious working relationships between partners, stakeholders and the community
- Enhancing partner and stakeholder cooperation and resource sharing at bushfire incidents and hazard reduction activities
- Providing a forum for clarifying and disseminating information on regulatory requirements and best practice principles for bushfire management and bushfire risk mitigation
- Supporting cooperation and coordination in delivering community education activities to build community resilience
- Development of a Bushfire Risk Mitigation Plan (BRMP).

In addition to these functions, groups at each level undertake specific functions, which are detailed below.

LOCALITY SPECIFIC FIRE MANAGEMENT GROUP (LSFMG)

FORMATION	Established by AFMGs on an as needs basis
AREA OF RESPONSIBILITY	Geographically defined area, such as a catchment, within a local government area
MEMBERS	All major stakeholders involved in the mitigation and response to bushfires in the locality
FUNCTIONS	• Management of a local risk or ecosystem that requires specific treatment • Develop localised plans for submission to the AFMG.
COMMUNICATIONS	**To the relevant AFMG:** • Provide plans and maps of bushfire mitigation activities for inclusion in the BRMP • Any information which identifies areas of risk • Details of mitigation activities undertaken • Issues requiring resolution.

AREA FIRE MANAGEMENT GROUP (AFMG)

FORMATION	Established by the Queensland Bushfire Plan
AREA OF RESPONSIBILITY	**Local Government Area** (In some instances an AFMG may cover multiple LGAs, upon approval from the Commissioner, QFES)
MEMBERS	• Chaired by Rural Fire Service, Area Director **Membership of AFMGs may consist of:** • Major landholders and land managers within the area • Government (local, state, Commonwealth) • Community groups involved in bushfire management • Industry groups • Any other entity or person deemed suitable by the AFMG.
FUNCTIONS	• Develop the BRMP for the relevant local government area/s • Provide a forum for stakeholders to discuss planning, preparedness, response and recovery strategies to the effects of bushfire • Provide the BRMP to the Local Disaster Management Group (LDMG) • Advise the LDMG of mitigation activities undertaken and residual risk • Provide a forum to foster interoperability during response • Provide strategic advice to the LDMG in the event of bushfire related activation.
COMMUNICATIONS	**To the relevant Regional Inter-Departmental Committee Bushfire:** • Provide plans and maps of bushfire mitigation activities • Any information which identifies areas of risk • Details of mitigation activities undertaken • Any information which identifies areas of residual risk • Issues requiring resolution. **To the LDMG:** • Report on mitigation activities undertaken • Report on areas of residual bushfire risk • Table the BRMP.

REGIONAL INTER-DEPARTMENTAL COMMITTEE BUSHFIRE (RIDCB)

FORMATION	Established by the Queensland Bushfire Plan
AREA OF RESPONSIBILITY	QFES region (Refer to Appendix 2 – QFES Regions)
MEMBERS	• Chaired by Regional Manager, Rural Fire Service **Membership of RIDCB may consist of:** • Major partners and stakeholders within the area • Government (local, state, Commonwealth) • Community groups involved in bushfire management • Industry groups • Any other entity or person deemed suitable by the RIDCB.
FUNCTIONS	• Establish the regional direction for bushfire management • Support AFMGs by providing advice and resolving issues • Evaluate residual risk issues identified by AFMGs and elevate to the SIDCB if appropriate • Ensure area and local fire management plans are linked to regional strategic direction • Develop the regional Strategic Fire Management Plan.
COMMUNICATIONS	**To the State Inter-departmental Committee Bushfire:** • Advise the SIDCB of regional strategic priorities • Advise the SIDCB on any issues which cannot be resolved regionally • Advise the SIDCB of residual risk • Report on mitigation activities undertaken and their outcome to the AFMG and relevant DDMGs • Advise AFMGs of strategic priorities • Inform the AFMGs of any directions or guidance from the SIDCB. **To relevant DDMG:** • Advise of mitigation activities undertaken • Advise of areas of residual bushfire risk • Provide information on regional strategic priorities • Provide information on the regional Strategic Fire Management Plan.

STATE INTER-DEPARTMENTAL COMMITTEE BUSHFIRE (SIDCB)

FORMATION	Established by the Queensland Bushfire Plan
AREA OF RESPONSIBILITY	State of Queensland
MEMBERS	• Chaired by Assistant Commissioner, Rural Fire Service **Membership of the SIDCB may consist of:** • State Government agencies • Critical infrastructure providers • Government owned corporations • Local government representatives • Non-government organisations • Commonwealth agencies • Any other entity or person deemed suitable by the SIDCB.
FUNCTION	• Provide strategic leadership in bushfire management • Develop and adopt tools and processes to enable consistent and continuous improvement in bushfire management • Provide strategic context to support bushfire planning • Evaluate residual risk issues identified by the RIDCB.
COMMUNICATION	**To the RIDCB:** • Advise RIDCB of strategic priorities • Inform RIDCB of any directions or guidance. **To the State Disaster Coordination Group (SDCG):** • The SIDCB provides reports and recommendations, where appropriate, about matters relating to bushfire management.

2.1.2 Interaction with Queensland's Disaster Management Arrangements (QDMA)

Fire management groups will interact with disaster management groups to facilitate effective bushfire management across all phases.

A key priority for fire management groups is the presentation to their relevant disaster management group of:

1 Seasonal bushfire risk outlook
2 Identified areas of bushfire risk
3 Mitigation activities planned and undertaken
4 Residual risk remaining at the conclusion of mitigation activities.

LDMGs will use this information to inform the Local Disaster Management Plan (LDMP) and manage areas of residual risk in relation to bushfire.

The management of residual risk in Queensland is outlined within the **Queensland Emergency Risk Management Framework (QERMF)**[5].

Queensland's disaster management arrangements are outlined in the **QSDMP**[6].

2.1.3 **Key Positions**

Queensland's bushfire management arrangements identify key statutory positions which enable effective bushfire management. If a bushfire requires a disaster declaration, key positions identified in the QSDMP may also be involved in a bushfire event.

The key positions for bushfire management in Queensland are:

COMMISSIONER, QUEENSLAND FIRE AND EMERGENCY SERVICES

POSITION	Chief Executive/Commissioner, Queensland Fire and Emergency Services
APPOINTMENT	Appointed by the Governor in Council upon recommendation of the Minister for Fire and Emergency Services
ROLE	• Responsible for bushfire management • Responsible for making a declaration of a State of Fire Emergency (with Ministerial approval) • Responsible for making notifications that impose restrictions on outdoor fires • Authorised fire officer as prescribed in the *Fire and Emergency Services Act 1990.*

CHAIRPERSON – STATE INTER-DEPARTMENTAL COMMITTEE BUSHFIRE

POSITION	Chairperson – State Inter-Departmental Committee Bushfire
APPOINTMENT	Appointed by the Commissioner, Queensland Fire and Emergency Services
ROLE	• Manage and coordinate the business of the committee • Ensure the group performs its functions • Report regularly to the State Disaster Coordination Group about the performance of the committee.

CHAIRPERSON – REGIONAL INTER-DEPARTMENTAL COMMITTEE BUSHFIRE

POSITION	Chairperson – Regional Inter-Departmental Committee Bushfire
APPOINTMENT	Appointed by the Commissioner, Queensland Fire and Emergency Services
ROLE	• Manage and coordinate the business of the committee • Ensure the group performs its functions • Report regularly to the SIDCB about the performance of the committee • Liaise with the Chairperson of District Disaster Management Groups within their region.

CHAIRPERSON – LOCALITY SPECIFIC/AREA FIRE MANAGEMENT GROUP

POSITION	Chairperson – Locality Specific/Area Fire Management Group
APPOINTMENT	Appointed by the Commissioner, Queensland Fire and Emergency Services
ROLE	• Manage and coordinate the business of the group • Ensure the group performs its functions • Report regularly to the AFMG/RIDCB about the performance of the group • Liaise with the Chairperson, Local Disaster Management Group/Local Disaster Coordinator.

CHIEF FIRE WARDEN

POSITION	Chief Fire Warden
APPOINTMENT	Appointed by the Commissioner, QFES and legislated in the *Fire and Emergency Services Act 1990*
ROLE	• Appointment of fire wardens • Support and manage fire wardens within their district including provision of advice, training and resources • Issue Permits to Light Fire if no fire warden is appointed to a district • Advise on or issue permit restrictions and fire bans to limit or prohibit the lighting of fire • Issue permits under certain circumstances • Determine Permit to Light Fire applications which extend across multiple fire warden districts • Determine Permit to Light Fire for land where the fire warden is the owner/occupier of the land • Determine Permit to Light Fire application which has been referred by a fire warden • Set conditions to control a permitted fire • Cancel or make amendments to any Permit to Light Fire • Prohibit the lighting of a fire • Recommend fire restrictions • Lay complaints for the purpose of prosecution • Other duties as required by the Commissioner, Queensland Fire and Emergency Services.

FIRE WARDEN

POSITION	Fire Warden
APPOINTMENT	Appointed by Area Director, Rural Fire Service, fulfilling the role as Chief Fire Warden as delegated by the Commissioner, QFES and legislated in the *Fire and Emergency Services Act 1990*
ROLE	• Provide community awareness on hazard reduction and the safe and responsible use of fire • Determine Permit to Light Fire applications within their designated Fire Warden district • Set conditions to control a permitted fire • Cancel or make amendments to any Permit to Light Fire • Lay complaints for the purpose of prosecution for an offence against the *Fire and Emergency Services Act 1990* • Appoint a Deputy Fire Warden for a period not extending three months.

RURAL FIRE BRIGADE FIRST OFFICER

POSITION	First Officer
APPOINTMENT	Elected to the position by brigade members for a period of two years
ROLE	• Lead the brigade in all operational aspects • Ensure the safety of brigade members and firefighters • Ensure brigade equipment is positioned in appropriate locations and is in operational condition • Ensure brigade members are appropriately trained • Continually improve the brigade's operational functioning.

2.1.4 Roles and Responsibilities – Overview

- QFES is the primary agency for bushfire management in Queensland and is responsible for the development, implementation and review of the Plan.

Further QFES responsibilities in relation to bushfire management can be located in Appendix 3.

To further enable bushfire management in Queensland, there are numerous stakeholders which have prescribed roles and responsibilities through legislation, land management, memorandums of understanding, this Plan or other documents. The allocation of these roles and responsibilities facilitate a coordinated approach and establishes bushfire management as a shared responsibility in Queensland.

Roles and responsibilities are outlined in Appendix C.

2.1.5 Occupiers of Land

- Land ownership or occupation in Queensland is dispersed between a number of entities. However, the responsibilities are the same for all.
- The *Fire and Emergency Services Act 1990* outlines these responsibilities which include:
  - Immediately taking all reasonable steps to extinguish or control a fire
  - Reporting the existence and location of a fire
  - Complying with a requirement from the Commissioner, Queensland Fire and Emergency Services to reduce the risk of fire occurring on the premises.

The *Fire and Emergency Services Act 1990* defines occupier and premises as follows:

- **Occupier** – the owner, lessee or person apparently in charge of the premises or a person who has the care, management or supervision of the premises or who is conducting a business at the premises
- **Premises** – any land or building.

For the purposes of the Plan, occupiers of land will be referred to as 'land managers'.

2.1.6 Exemptions

The Queensland Parks and Wildlife Service (QPWS) is exempt from the provisions of Division 1, Part 7 of the *Fire and Emergency Services Act 1990* in relation to the lighting of fires within land for which they are responsible, except in those circumstances where a local fire ban has been imposed or a State of Fire Emergency has been declared. QPWS has its own internal approval processes for fire management activities on land it manages.

These exemptions apply to a person acting in the performance of duties under the *Nature Conservation Act 1992* and the *Forestry Act 1959*.

The exemption only applies to QPWS and Department of Agriculture and Fisheries managed land and precludes special wildlife reserves, nature refuges, coordinated conservation areas and forest entitlement areas.

This exemption enables QPWS to undertake hazard mitigation and response activities as required without QFES approval.

2.1.7 Legislative Framework and Documents

The legislative instruments relating to bushfire management are:

- *Building Act 1975*
- *Disaster Management Act 2003*
- *Fire and Emergency Services Act 1990*
- *Forestry Act 1959*
- *Nature Conservation Act 1992*
- *Planning Act 2016*
- *Public Safety Preservation Act 1986*
- *Vegetation Management Act 1999*
- Local Government Laws.

Further documents that provide guidance on bushfire management in Queensland include:

- Natural hazards, risk and resilience – Bushfire – State Planning Policy – state interest guidance material
- Bushfire Resilient Communities – Technical Reference Guide for the State Planning Policy State Interest 'Natural Hazards, Risk and Resilience – Bushfire'
- Australian Standard AS 3959 – Construction of buildings in bushfire-prone areas
- National Construction Code.

2.1.8 **Commonwealth Arrangements**

In some circumstances it may be necessary to seek Commonwealth, interstate or international assistance to effectively manage a bushfire event, particularly during the response phase.

The process for seeking Commonwealth assistance is outlined in the QSDMP and must be followed to manage events as described in the Plan.

Requests for interstate/international firefighting/ management assistance will be coordinated by QFES.

Requests are made to the National Resource Sharing Centre (NRSC). The NSRC is maintained by the Australasian Fire and Emergency Service Authorities Council (AFAC), which coordinates international and interstate deployments through its established partnerships and national arrangements.

3 Prevention

Prevention is the elimination or reduction of the exposure to a hazard on communities at risk.

Bushfire cannot be eliminated, however mitigation activities must be undertaken to reduce the likelihood, vulnerability and/or consequence of bushfire. Actively implementing prevention strategies plays a significant role in reducing the risk of bushfire and its potential associated impacts.

- All Queenslanders have a responsibility to reduce the potential for and the impact of bushfires.
- It is a shared responsibility of all land managers.

Some land managers will undertake a broader and more complex range of prevention functions as a result of the type and amount of land for which they are responsible or their respective legislative responsibilities.

3.1 Prevention Functions

Under the Plan, prevention functions are undertaken by a number of stakeholders. These functions are outlined in Table 1: Prevention Functions.

TABLE 1:
PREVENTION FUNCTIONS

LEAD	PREVENTION FUNCTIONS
Area Fire Management Group	• Assess the bushfire hazard in their area of responsibility • Develop the BRMP for the relevant local government area/s • Advise the LDMG of mitigation activities undertaken and residual risk
Department of Environment and Science (Queensland Parks and Wildlife Service)	• Conduct planned burns and other prevention activities on land it manages • Monitor bushfire risk and fire danger conditions across land it manages • Identify priority protection areas • Maintain road network and fire lines on its land
Department of Housing and Public Works	• Administer minimum standards for buildings in bushfire prone areas • *Building Act 1975* • Queensland Development Code • National Construction Code • Australian Standard AS 3959 – Construction of buildings in bushfire prone areas
Department of Natural Resources, Mines and Energy (DNRME)	• Managing underlying risk level relating to fire on DNRME land • Conduct planned burns and other prevention activities on land it manages • Monitor bushfire risk and fire danger conditions across land it manages
Department of Transport and Main Roads (DTMR)	• Manage bushfire risk within state-controlled road reserve • Manage closed rail corridors
HQ-Plantations	• Monitor bushfire risk across the Plantation Licence Area • Conduct planned burns and other prevention activities on Plantation Licence Area
Individual community members	• Understand bushfire risk in the environment • Undertake preparations to make their property less vulnerable to bushfires • Make decisions about their response in the event of a bushfire
Land Managers	• Identify bushfire risk on their property • Enact mitigation strategies

LEAD	PREVENTION FUNCTIONS
Local Disaster Management Group (LDMG)	• Coordinate bushfire risk-mitigation strategies for the local government area in consultation with the AFMG • Manage residual bushfire risk • Report residual bushfire risk to relevant DDMG, where appropriate
Local Government	• Administer local planning scheme • Administer building standard approvals and compliance • Conduct bushfire mitigation activities on land owned/managed by local government • Designate bushfire prone areas
Persons/Businesses who operate overhead electricity networks (Aurizon, Energy Queensland, Essential Energy, Powerlink, Queensland Rail, RTA Weipa)	• Assess and manage bushfire risk throughout their network • Develop and undertake bushfire mitigation activities
Queensland Fire & Emergency Services (QFES)	• Coordinate, plan and facilitate bushfire mitigation programs • Granting of Permit to Light Fire • Develop guidance material • Support the development of Bushfire Risk Mitigation Plans (through AFMGs) • Monitor bushfire risk in Queensland • Building fire safety
Queensland Treasury	• *Planning Act 2016* • State Planning Policy

3.2 Mitigation Strategies

Mitigation strategies are undertaken across three areas:

1 Land use (planning/development/construction)

2 Risk-based planning

3 Reducing the likelihood of unplanned fire in the landscape.

3.2.1 Land Use, Building and Construction Standards

Land use planning has the greatest potential to implement prevention and mitigation measures and facilitate the response to bushfire.

Land use planning and development assessment in Queensland is administered under the *Planning Act 2016* and the Planning Regulation 2017 and is further detailed in the State Development Assessment Provisions, State Planning Policy (SPP), regional plans and local planning schemes. These SPP frameworks outline planning and building requirements in bushfire prone areas.

QFES is responsible for identifying bushfire prone areas in Queensland and preparing and updating the 'Bushfire Prone Areas' layer provided on the SPP Integrated Mapping System (SPP IMS), the Development Assessment Mapping System (DAMS) and QSpatial.

A bushfire prone area is land designated by local governments as an area likely to be subjected to bushfires. Local governments may refine bushfire prone areas by conducting an appropriate risk assessment.

Specific guidance concerning planning and building in bushfire prone areas is provided by the State Planning Policy. This policy identifies 17 state interests, which need to be properly considered and integrated into local planning instruments, regional plans and development decisions. The State interest – *natural hazards, risk and resilience*, must be integrated into planning and development outcomes (where relevant) to avoid or mitigate risks associated with natural hazards to protect people and property and enhance the community's resilience to natural hazards.

Bushfire prone areas are a natural hazard area under the State Planning Policy and further considerations are outlined in the guidance material – **Natural hazards, risk and resilience – bushfire**[7]. Further technical guidance to implement the state interest is provided in the **Bushfire Resilient Communities Technical Reference Guide**[8] produced by QFES. When considering new or revised local planning schemes or new developments/ sub-divisions, or where major change of use occurs, both documents should be considered and incorporated to avoid or mitigate bushfire risk.

The *Planning Act 2016*, Planning Regulation 2017 and the State Planning Policy are administered by Queensland Treasury.

Bushfire risk can also be mitigated through building and construction standards, which are legislated in the *Building Act 1975* and the Queensland Development Code, which is also informed by the National Construction Code (NCC). Further requirements for building in a bushfire prone area are provided by Australian Standard 3959 – Construction of buildings in bushfire-prone areas.

The *Building Act 1975* and the Queensland Development Code are administered by DHPW.

Local governments are responsible for planning in their local communities and ensuring local planning controls are consistent with the objectives and requirements set by the State Government. Local governments' role includes designating areas in which buildings must comply with AS 3959.

3.2.2 Risk-based Planning

Risk-based planning occurs in two phases, firstly assessing the hazard and secondly, determining and managing the risk. This phased approach enables the identification of bushfire risk areas, which should be targeted for prevention and preparedness activities and the extent of the bushfire risk. Some of the factors that determine the likelihood of a bushfire impacting an area include (but are not limited to):

- Fire weather conditions expected in the area (historically, recently and into the future given climate change predictions)
- Fuel structure, load and re-accumulation rates
- Topography
- Potential sources of ignition.

Planning at this point focuses on the bushfire hazard and is undertaken by the AFMG. The results of this process are presented in the Bushfire Risk Mitigation Plan (BRMP). The BRMP identifies the bushfire hazard requiring mitigation within a local government area, with an emphasis on a community's bushfire interface zones. It also plans and reports mitigation activities and identifies coordination strategies to support a bushfire response.

AFMGs are responsible for developing BRMPs for their area of responsibility. All AFMGs have access to an information technology platform i.e. Catalyst, that facilitates the development of BRMPs. This platform is administered by QFES.

AFMGs will formally table the BRMP, at the beginning of the mitigation season and a consolidated report of the unmitigated (residual) risk remaining following the completion of mitigation activities to the LDMG. Utilising the BRMP and the Queensland Emergency Risk Management Framework (QERMF), enables the identification of risk-based exposure and vulnerability within a local government area. The completion of the QERMF process for bushfire risk as outlined in Figure 2 on page 27, will inform the development of the relevant bushfire components of the annually updated Local Disaster Management Plan (LDMP).

This will enable the LDMG to develop seasonally appropriate community messaging and bushfire risk management strategies, across preparedness and response, for inclusion within the LDMP.

3.2.3 Reducing the Likelihood of Fire in the Landscape

Reducing the likelihood of fire in the landscape is an active method of mitigating bushfire risk. Some strategies may impact the community. To reduce this impact land managers, should make notifications via appropriate public information channels.

Strategies which can be undertaken include:

3.2.3.1 FUEL MANAGEMENT

There are a range of fuel management techniques available to land managers to manage bushfire fuels in the landscape. Actively reducing the fuel load within the landscape will influence the probability of ignition, movement and impact of a bushfire. All fuel management techniques must be undertaken to achieve a clear, measurable outcome.

These techniques include:

PRESCRIBED BURNS (PLANNED BURNS)

Planned burns are conducted for a range of purposes to achieve a specific objective. These objectives include:

- Reducing the risk of bushfire impacts on adjacent assets
- Reducing the size and intensity of bushfires in the landscape
- Maintaining, promoting or inhibiting ecological processes
- Controlling weeds
- Supporting economic activities such as timber production or pasture regeneration.

The application of fire in the landscape to achieve these objectives comes with inherent risks. These burns must be planned and conducted to ensure the safety of participants, control the fire within the intended area and achieve the desired objective.

To assist the planning and conduct of these burns, the Queensland Parks and Wildlife Service (QPWS) has developed the **Planned Burn Guidelines**[9]. These guidelines are based on Queensland's thirteen Bioregions and Fire Vegetation Groups. They provide information and tools to QPWS rangers and other land managers to identify fire management issues and conduct planned burns that meet fire management objectives. The guidelines should be considered when conducting a planned burn.

A Permit to Light Fire is required to undertake a planned burn except where a legislative exemption applies.

MECHANICAL TREATMENTS

Mechanical fuel treatments can be undertaken either in conjunction with or independently of planned burns. These treatments include slashing, mulching and thinning.

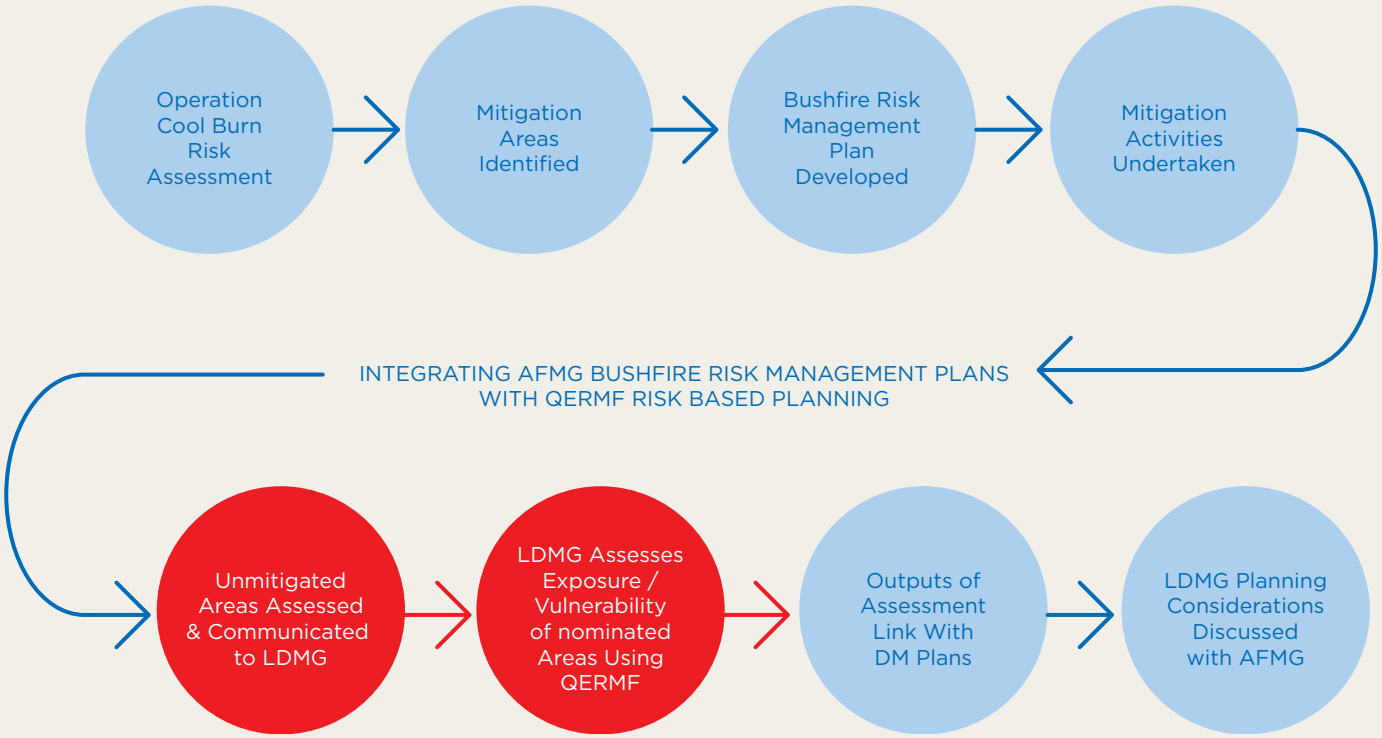
GRAZING

Targeted grazing by livestock maybe considered as an appropriate technique to achieve a clearly defined fuel management outcome, depending upon the tenure of the estate.

VEGETATION MANAGEMENT

Vegetation management legislation enables land managers to undertake a range of activities to manage bushfire. This legislation enables activities to be undertaken in both prevention and response phases and are further explained in the **Clearing for Fire Management Guide**[10] Land managers are also able to obtain advice by contacting the **Vegetation Management Hub**[11].

FIGURE 2:
QERMF PROCESS FOR BUSHFIRE RISK



Vegetation management legislation is administered by DNRME.

Local government may also establish and enforce local laws relating to vegetation management to complement state legislation.

OTHER FUEL TREATMENTS

A range of other fuel treatment techniques such as targeted invasive species management and manual fuel removal may also be applied to achieve specific outcomes.

3.2.3.2 REGULATORY

PERMIT TO LIGHT FIRE

QFES utilises Permits to Light Fire to reduce the likelihood of unintended human-caused fire ignitions in the landscape. Land managers must apply for a Permit to Light Fire to undertake a planned burn. These permits establish the minimum conditions that must be in place for a land manager to undertake a planned burn. Permits are issued by Fire Wardens in the first instance, or where appropriate, Chief Fire Wardens. These wardens are located throughout the state and can be located by accessing the **Rural Fire Service website**[12].

HAZARD REDUCTION NOTICE

A hazard reduction notice directs a land manager to reduce the risk of fire occurring or reduce the potential danger to persons, property or the environment. This notice requires a land manager to remove, dispose of or otherwise deal with, any vegetation or other flammable matter on a property.

QFES is responsible for serving these notices under the *Fire and Emergency Services Act 1990.* Failure to comply with a hazard reduction notice may result in enforcement action being taken against the land manager. QFES is responsible for commencing enforcement actions.

Local government may also serve a compliance notice on a responsible person for an allotment, which requires the person to take a specified action to reduce or remove the fire hazard.

To enable a coordinated approach, QFES and the relevant local government are to collaborate on compliance issues and advise each other of the intention to serve a hazard reduction notice.

CANE BURNING NOTIFICATION

The **Cane Burning Notification**[13] gives cane growers the authority to burn sugar cane in accordance with the *Fire and Emergency Services Act 1990,* provided minimum conditions are met. The notification issued in the Queensland Government Gazette on 31 May 2019 sets out the minimum conditions to burn sugar cane and replaces previous versions released in 2004 and 2010. Cane growers must apply for a Permit to Light Fire if they cannot meet conditions of the notification or if they believe that they are unable to meet these conditions.

BURNING NOTIFICATION

The **Burning Notification**[14] outlines the circumstances in which a fire may be lit without the need for a Permit to Light Fire. The notification was issued in the Queensland Government Gazette on 30 July 2010 by the Commissioner, Fire and Emergency Services in accordance with the *Fire and Emergency Services Act 1990*.

FIRE BANS AND STATE OF FIRE EMERGENCY

In Queensland, the use of fire can be restricted by imposing either a Local Fire Ban or a State of Fire Emergency.

When predicted conditions and weather forecasts indicate that fires may be difficult to control and pose a danger to communities, the Commissioner, Queensland Fire and Emergency Services or their delegate has the authority under the provisions of the *Fire and Emergency Services Act 1990* to impose a local fire ban.

Local Fire Bans are commonly imposed over an entire local government area and prohibit the lighting of all (or certain types) of fires, depending on the severity of the forecast conditions. While a local fire ban remains in force, any authority given under the *Fire and Emergency Services Act 1990* or another act to light a fire in the fire ban area ceases to have effect.

When fire weather conditions become extremely dangerous, the Commissioner, Queensland Fire and Emergency Services, with the approval of the Minister, can declare a State of Fire Emergency.

A State of Fire Emergency may:

- Prohibit the lighting of fires in the State or parts of the State subject to any special conditions or exemptions as prescribed by Commissioner, Queensland Fire and Emergency Services

- Require the granting of a permit to light fire for those types of fire not normally subject to a permit
- Require any person finding a fire burning in the open to take all reasonable steps to extinguish the fire and report the fire
- Prohibit the use of any appliance, material or substance specified that is or likely to cause a fire risk
- Order the suspension of operations as may be specified.

When a State of Fire Emergency is declared any authority given under the *Fire and Emergency Services Act 1990* or any other Act to light a fire, ceases to have effect.

Fire bans are advertised widely and remain in force for the period specified in the local fire ban notice or the State of Fire Emergency declaration or until cancelled.

Local governments may also make a local law to regulate the lighting of and maintaining fires in the open, except the lighting of or maintaining a fire that is authorised under the *Fire and Emergency Services Act 1990*.

ENFORCEMENT

Anyone found responsible for lighting fires without a permit where one was required, or outside of the permit conditions, can be prosecuted. Prosecution can also occur if a person is found responsible for lighting a fire that breaches relevant legislation or local laws.

QPWS is able to take enforcement action for fires occurring on park or forest land.

QFES is responsible for enforcing offences pursuant to the *Fire and Emergency Services Act 1990*.

Local government is responsible for enforcing local laws relating to fire.

3.2.3.3 ADDITIONAL MITIGATION STRATEGIES

FIRE LINES AND FIRE ACCESS TRACKS

Fire lines and fire access tracks contribute to bushfire risk management in the following ways:

- Increasing access and facilitating rapid response to fire occurrences
- Providing fuel reduced areas from which suppression operations including back burning operations can be conducted
- Enabling planned burn operations to be undertaken by dividing the landscape into treatable parcels.

ELECTRICITY

Electricity can start bushfires when infrastructure is damaged or foreign objects contact powerlines, or if powerlines contact each other or the ground. This can cause arcing and generate sparks that can ignite dry vegetation. While the number of bushfires ignited by electricity is very low, once started they have the potential to burn large areas.

Preventative actions are undertaken by network providers and these include:

- Identification of all areas prone to high bushfire hazard and the location of all electricity assets within those areas
- Asset maintenance procedures including identification and rectification of asset defects, particularly in high bushfire risk areas
- Vegetation management strategies and procedures
- Equipment and construction standards as related to bushfire mitigation
- Information is provided to field staff in relation to bushfires and public safety
- Liaison with other organisations regarding bushfire related issues
- Public awareness and the responsibilities of owners of private overhead electric lines
- Bushfire emergency response and management capability
- Activating operational procedures during times of high fire danger and total fire ban days
- Investigation of bushfire related incidents and monitoring of trends
- Continued partnership with QFES on mitigation activities, communication protocols and sharing of information.

All those who own/operate electricity networks have an obligation to manage bushfire risk which is managed through collaborative arrangements with key stakeholders such as QFES, AFMGs and DMGs.

3.3 Environment

Fire plays an important role in shaping the landscape and the composition of the fauna and flora within it and the resulting bushfire risk. Manipulating fire to create or protect desirable landscape features and habitats is an important aspect of land management. For these reasons, it is critical that ecological considerations are taken into account.

The **Fire Management Guidelines**[15] provide guidance to those with land management responsibilities regarding the use of fire from an ecological perspective, and to facilitate and enhance biodiversity. These guidelines should be considered when developing fire mitigation programs.

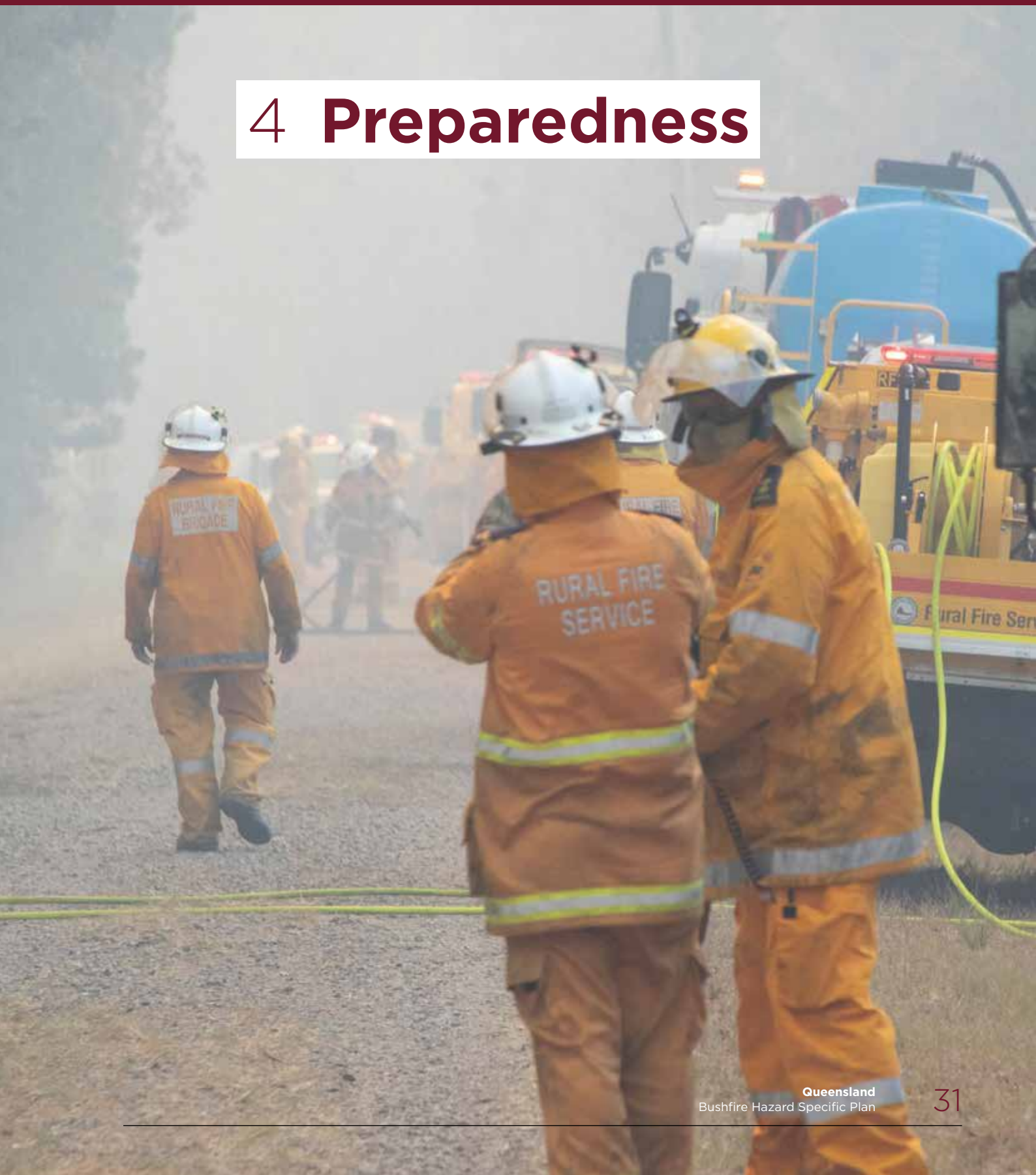
The Department of Environment and Science is responsible for maintaining these guidelines.

3.4 Bushfire Arson Prevention

Deliberately lit bushfires and arson incidents are a major threat to Queensland communities. Reducing and preventing these incidents will be undertaken by maximising cooperation between QFES, Queensland Police Service, land managers, the criminal justice system and all levels of government through instigating a range of initiatives that foster state-wide collaboration to combat these incidents. These initiatives may include preventative community engagement programs.

The Bushfire Arson Sub-Committee is the forum through which this collaborative and consultative approach is facilitated. The Bushfire Arson Sub-Committee is a sub-committee of the SIDCB.

4 Preparedness



Preparedness is the taking of preparatory measures to ensure communities, resources and services are able to cope with the effects of bushfire.

All stakeholders in Queensland's bushfire management arrangements are responsible for preparedness.

Queensland's preparedness activities align with the Queensland State Disaster Management Plan (QSDMP) and focus on three key elements:

- Planning
- Capability integration
- Community engagement.

The QSDMP should be referred to for general guidance in relation to these areas. There are specific requirements for bushfire management, and these are outlined below.

4.1 Planning

All land managers should develop plans that outline their arrangements to effectively manage bushfire. These plans should be developed within the context of the four phases of bushfire management: prevention, preparedness, response and recovery.

4.1.1 Individual Planning

Individual planning involves the development of Bushfire Survival Plans by individual households to outline their approach in the event of a bushfire. Bushfire Survival Plans focus on actions in relation to 'leaving' and 'staying'.

Guidance for households to complete these plans can be found at the **Rural Fire Service**[16].

4.1.2 Local Planning

Planning at the local level is undertaken by the Locality Specific/Area Fire Management Group (AFMG) and the Local Disaster Management Group (LDMG).

The LS/AFMG is responsible for developing the Bushfire Risk Mitigation Plan (BRMP). Information regarding BRMPs can be found in Chapter 3 of the Plan.

The BRMP is provided to the LDMG and is used to inform the Local Disaster Management Plan (LDMP) in relation to bushfire management.

AFMGs and LDMGs coordinate across their areas of responsibility to ensure bushfire risk is managed effectively.

4.1.3 Regional Planning

Planning at the regional level is undertaken by the Regional Inter-departmental Committee Bushfire (RIDCB).

The RIDCB develops the Strategic Fire Management Plan for the respective region, focussing on residual bushfire risk as identified by the AFMG, and guiding the arrangements across the prevention, preparedness, response and recovery phases. The RIDCB collaborates with the relevant District Disaster Management Group (DDMG) to inform planning.

4.1.4 State Planning

Planning at a state level is the responsibility of QFES, who develops and maintains the Queensland Bushfire Plan (the Plan).

QFES also develops an internal operational plan for bushfire, which outlines specific actions and accountabilities that are undertaken by QFES to meet its legislative responsibilities and requirements outlined in the Plan.

Other state agencies with responsibilities for bushfire management must develop operational plans to meet their legislative responsibilities and requirements outlined in the Plan.

4.1.5 Evacuation Planning

Evacuations can be broadly divided into two categories, planned and emergent.

Planned evacuations allow time to consider and document possible scenarios and to develop an agreed approach to the management and coordination of an evacuation, through consultation with a broad range of stakeholders. This approach provides an opportunity to mitigate the time and speed dynamics of a bushfire.

Local government through the LDMG is responsible for developing these evacuation plans. These plans are a sub-plan to the Local Disaster Management Plan.

Evacuations must be planned and managed in the manner described in the **Prevention, Preparedness, Response and Recovery Disaster Management Guideline**[17].

Emergent evacuations are undertaken in an immediate response to a bushfire. More information regarding emergent evacuations is described in Chapter 5 – Response.

4.1.6 Neighbourhood Safer Place

A Neighbourhood Safer Place (NSP) is a local open space or building where people may gather, as a last resort, to seek shelter from a bushfire. NSPs are not evacuation locations and emergency management and support may not be in attendance to provide assistance.

The suitability of locations to be designated as an NSP is assessed by QFES in collaboration with local government. Those NSPs that have been identified in local government areas, can be found in the relevant LDMP and the Rural Fire Service website.

4.1.7 Risk-based Planning

The assessment of risk enables preparedness by informing planning at the local, regional and state level. A number of sources inform risk and these are identified below:

SEASONAL OUTLOOK

Seasonal outlooks are developed by systematically considering a range of data, including but not limited to current fuels, forecast weather and soil moisture levels. The outlook can be developed from a number of perspectives including prevention outlook (two to 12 months), preparedness outlook (two to six days) or a response outlook (today and tomorrow).

These outlooks are available via SABRE, which is an online system that applies fire behaviour science to the inputs identified earlier to provide analytics and decision support. The analytics include geospatial, operations and forecast weather datasets. Other products available through SABRE include historical weather analysis, six-day look ahead bushfire potential, six day fire weather and behavioural viewer, real time bushfire incident monitors and probabilistic spread predictions. The SABRE system is managed by QFES and available to a range of bushfire stakeholders.

Seasonal outlooks are developed and distributed by QFES.

FIRE WEATHER FORECASTING

The Bureau of Meteorology (BOM) is responsible for developing and disseminating fire weather forecasts including daily broadcasting concerning Fire Danger Ratings.

The BOM through formal arrangements with QFES, provides a dedicated meteorologist based within the State Disaster Coordination Centre (SDCC) which is co-located with the State Operations Centre (SOC). Both centres are managed by QFES.

FIRE DANGER RATINGS

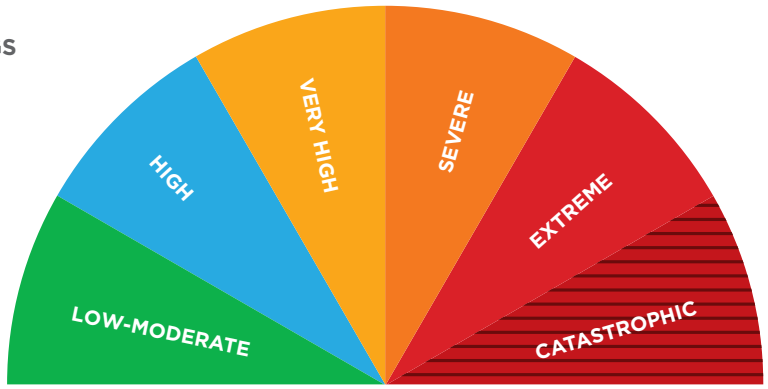
The BOM in consultation with QFES is responsible for developing the Fire Danger Rating. The Fire Danger Rating is a measure of the difficulty in controlling or suppressing fires. There are six Fire Danger Ratings as outlined in Figure 3.

Fire Danger Ratings are displayed in communities and suburbs throughout the state to indicate the current rating for each region. Methods to display Fire Danger Ratings include electronic, media and display boards.

QFES is responsible for advising bushfire management stakeholders of the fire danger rating for each given day.

Fire danger ratings should be utilised by land managers to inform preparedness activities.

FIGURE 3:
FIRE DANGER RATINGS



LOW-MODERATE

If a fire starts it can be easily controlled.

It poses little or no risk to life or property.

People should monitor the situation and stay informed.

HIGH

If a fire starts, it can most likely be controlled.

Loss of life is unlikely and damage to property will be limited.

People should monitor the situation and stay informed.

VERY HIGH

If a fire starts it may be difficult to control and may move more quickly, with flames that may burn into the tree tops. Well-prepared and well-constructed homes should be used as a place of safety.

Some homes and businesses may be damaged or destroyed.

SEVERE

Expect hot, dry and possible windy conditions. If a fire starts and takes hold, it may be uncontrollable and move quickly, with flames that may be higher than roof tops. Well prepared homes that are actively defended can provide safety.

People may be injured and homes and businesses may be destroyed.

Leaving is the safest option.

EXTREME

Expect extremely hot, dry and windy conditions. If a fire starts and takes hold, it may be uncontrollable, unpredictable and fast moving. Spot fires will start, move quickly and come from many directions. Homes that are situated and constructed or modified to withstand a bushfire, that are well prepared and well-constructed homes may not be safe.

People may be injured and homes and businesses may be destroyed.

Leaving is the only option for survival.

CATASTROPHIC

These are the worst conditions for a bushfire. If a fire starts it may be uncontrollable, unpredictable and fast moving. Well-prepared and well-constructed homes are not designed or constructed to withstand fires in these conditions. They are not safe.

Many people may be injured and many homes and business may be destroyed.

The safest place to be is away from bushfire prone areas. Leaving is the only option for survival.

4.2 Capability Integration

Queensland has the capability to coordinate bushfire management activities across the local, state and Commonwealth levels and within various industries. All entities are required to work in a collaborative and coordinated manner to manage bushfire risk in Queensland. This is achieved by undertaking capability integration activities outlined in the QSDMP.

Capabilities at each level are outlined below:

4.2.1 State Capability

STATE OPERATIONS

QFES maintains the State Operations Centre (SOC).

The SOC is the control centre for state level operations, information centre for bushfires and monitors operational readiness at local, regional and state levels. It operates continuously with staffing levels commensurate with the fire conditions.

The SOC also accommodates other emergency and support organisations who assist during the management of a bushfire.

The functions of the SOC are outlined in Chapter 5 – Response.

The Commissioner, Queensland Fire and Emergency Services has the authority to appoint a Commander – State Operations. The Commander is appointed in circumstances where the SOC has been activated, state-wide operational activity is occurring (large, complex and extended duration incidents with heavy resource commitments) or interstate/ international deployments are occurring.

In the absence of delegation, the Commissioner, Queensland Fire and Emergency Services is the Commander – State Operations. The Commissioner, Queensland Fire and Emergency Services has the authority to appoint a delegate, who will be a suitably qualified Deputy or Assistant Commissioner, Queensland Fire and Emergency Services.

The role of the Commander – State Operations is outlined in Chapter 5 – Response.

In some circumstances, the State Disaster Coordination Centre (SDCC), may be activated. The SDCC supports the State Disaster Coordinator through the coordination of a state level operational response capability during disaster operations and ensures information about an event and associated disaster operations is disseminated to all levels, including the Australian Government.

The SDCC is also supported by Non-Government Organisations (NGOs) and the Department of Defence during operations. The level of support is determined by the scale of the event as outlined in the indicative levels of activation for response arrangements in the QSDMP.

The SOC and the SDCC coordinate through their respective commanders.

FIREFIGHTING RESOURCES

QFES through the Rural Fire Service and the Fire and Rescue Service maintains a firefighting capability to meet expected operational requirements. This capability is trained, exercised and equipped in preparation for a response to bushfire.

Other agencies and organisations such as Local Government, Queensland Parks and Wildlife Service, Department of Agriculture and Fisheries, SEQ Water and HQ-Plantations maintain a firefighting capability to respond to bushfires occurring on land within their area of responsibility and where requested may provide support to QFES.

In the event that resources beyond the capacity of the state are required, arrangements are established to facilitate the provision of such resources. These arrangements are outlined in Chapter 2 of the Plan and Chapter 2 of the QSDMP.

SPECIALIST RESOURCES

QFES provides specialist resources to enable preparedness and response activities. These resources are sourced internally from QFES (for example, fire behaviour analysts, aerial observers and the State Emergency Service) or through contractual arrangements with the BOM, aviation or heavy machinery operators.

Aerial assets are utilised in Queensland, particularly during the response phase. These assets are effective in providing support to ground crews, improving the probability of first attack success and in the short term, reduce the fire intensity and rate of spread.

QFES is responsible for coordinating the availability of these assets. The State Aircraft Fleet consists of 'Call when Needed Aircraft', 'Contracted Aircraft', 'Queensland Emergency Helicopter Network' and

remotely piloted aircraft. The fleet can be utilised for a range of fire fighting tasks such as fire suppression, surveillance and reconnaissance.

4.2.2 Local Capability

Local capability is provided through QFES's Rural Fire Service, primary producer brigades and in some instances, local government.

Rural fire brigades are located in various communities throughout the state. They undertake a range of activities to educate and prepare their communities for the bushfire season. These brigades also respond to fires within their local area or in support of other brigades and emergency service workers through the use of fire fighting equipment and the application of fire-fighting knowledge and tactics.

Primary producer brigades provide a firefighting capability where land use is based on primary production. The primary focus of these brigades is their own land or neighbouring properties.

Local governments may also have a range of assets which can be used to prepare communities for the fire season and respond, where appropriate, to fire occurring on land for which local government is responsible.

4.2.3 Commonwealth Capability

The Commonwealth can provide a range of resources to assist Queensland. These resources are coordinated through Emergency Management Australia.

4.3 Community Engagement

QFES develops and delivers programs and associated materials to inform communities about bushfire. Other state agencies may develop and undertake community engagement activities and messaging in relation to bushfire. These activities and messaging must be coordinated with QFES as the primary agency for bushfire.

A key priority of community engagement is the communication of bushfire risk to Queensland communities.

AFMGs also coordinate and deliver community engagement programs to increase community awareness about bushfire, and to prepare communities for bushfire by disseminating information about bushfire prevention and risk reduction strategies.

Local government may also develop community education programs. These programs should be developed in collaboration with QFES.

Further information on community engagement is located at section 7.4 – Community Engagement of the QSDMP.

5 Response

Response involves undertaking appropriate measures to respond to an event, including actions taken and measures planned before, during and immediately after an event, to ensure that its effects are minimised, and persons affected by the event are given immediate relief and support.

5.1 Response Priority

In a bushfire event the first and highest priority is the:

- Protection and preservation of human life. This includes:
  - Safety of firefighters and emergency services personnel
  - Safety of community members.

While other priorities occur within a bushfire response and are referred to earlier in the Plan, the protection and preservation of human life is the highest priority when undertaking decision making in relation to competing priorities and developing incident action plans.

5.2 Response Arrangements

5.2.1 Queensland Fire and Emergency Services (QFES)

QFES is responsible for leading response to bushfire in Queensland. The response may involve direct firefighting and control or coordinating with other land managers, who have a direct responsibility for fighting a bushfire occurring on their land as a result of a statutory instrument.

QFES resources are scalable and coordinated by Incident Control Centres (ICC) in the first instance, Regional Operations Centres (ROCs) or the State Operations Centre (SOC).

QFES operates fire communication centres (FIRECOM) in each QFES Region. FIRECOM operates 24 hours per day and receives Triple Zero calls and dispatches appropriate QFES resources.

While the responsibility of QFES, the ICC, ROC and SOC should accommodate representatives from other organisations that are contributing to the response. This co-location approach enhances situational awareness and coordination of resources and operations.

5.2.2 Queensland Parks and Wildlife Service (QPWS)

QPWS is responsible for responding to bushfires that occur on land it manages and maintains a firefighting capability to meet this responsibility.

If the bushfire is a level 1 incident, it will be managed by QPWS. Descriptions of incident levels can be found on page 46.

A level 2 incident will also be managed by QPWS unless human life or property is threatened, or the bushfire is likely to progress beyond QPWS managed land, in which case the responsibility for the bushfire will be transferred to QFES (as will a level 3 incident). For level 2 and 3 incidents, QPWS will continue to coordinate with QFES to maintain an effective response.

During periods of escalated fire danger QPWS maintains Regional Coordination Centres to coordinate resource requests across the QPWS region and with other response agencies.

QPWS has a Memorandum of Understanding with QFES that outlines coordinating arrangements for bushfire occurring on the QPWS estate.

Forest officers, which are appointed under the *Forestry Act 1959*, can respond to and extinguish a fire within 3km of the forest estate if the person is of the opinion that such fire is likely to spread to and cause damage to the forest. This is particularly important for the protection of fire sensitive commercial timber species.

5.2.3 HQ-Plantations

HQ-Plantations is responsible for responding to bushfires that occur on land it manages. It may also respond to bushfire that is occurring on adjacent land and is posing a threat to the Plantation Licence Area.

HQ-Plantations maintains a firefighting capability which consists of nine Plantation Rural Fire Brigades. The Plantation Rural Fire Brigades are each commanded by a First Officer, as described in the key positions section of this Plan. All members of a Plantation Rural Fire Brigade are designated as an authorised fire officer as prescribed in the *Fire and Emergency Services Act 1990*.

If the bushfire is a level 1 incident on the Plantation Licence Area, it will be managed by HQ-Plantations. A level 2 incident may also be managed by HQ-Plantations, unless human life or property is threatened, or the fire is likely to progress beyond the Plantation Licence Area. In such a case the responsibility for the bushfire will be transferred to QFES, as will a level 3 incident.

HQ-Plantations and QFES will coordinate operations to ensure an effective response including the ability to place officers in each organisations' Incident Management Team for liaison and operational purposes, when fires are on or near the Plantation Licence Area.

5.2.4 Local Government

Some local governments maintain a response capability for fires that occur on their land. This capability may be enacted prior to the arrival of QFES and in response to level 1 incidents. A level 1 incident may be managed by local government providing it has the capacity and capability to respond.

In circumstances where human life or property is threatened the responsibility for response will transfer to QFES.

5.2.5 Industry

Some industries maintain a response capability for fires that occur on land they own, occupy or manage. This capability may be enacted prior to the arrival of QFES and will coordinate with QFES upon their arrival.

5.2.6 Land Managers

All land managers have a responsibility to take all reasonable steps to extinguish or control bushfire.

5.2.7 Queensland's Disaster Management Arrangements

Some bushfires may result in Queensland's disaster management arrangements being enacted. Activation of these arrangements is not dependent on a disaster situation being declared and is determined by respective disaster management groups in accordance with their plans. In this case, QFES remains the primary agency for bushfire response and coordinates with those disaster management groups that have activated.

In the event a disaster situation is declared, pursuant to the *Disaster Management Act 2003*, the relevant disaster management group is responsible for managing the bushfire event. QFES provides the firefighting capability to enable the disaster management group to effectively manage the event.

5.2.8 *Public Safety Preservation Act 1986*

Bushfire with the potential to cause danger of death, injury or distress to any person, a loss of or damage to property, or pollution of the environment may result in an emergency situation being declared under the *Public Safety Preservation Act 1986*. Commissioned police officers (Inspector and above) or certain appointed police officers at the rank of Senior Sergeant may make such a declaration.

Upon declaration of an emergency situation for a bushfire, the Queensland Police Service (QPS) is in command for the area subject to the emergency situation. QFES provides the firefighting capability to enable the QPS to effectively manage the emergency situation.

In recognition of the complexities involved in bushfire response, both the QPS and QFES will work in a coordinated and collaborative manner.

5.3 Response Functions

A number of organisations will be involved in responding to a bushfire event.

Table 2:
Response Functions describes the primary response functions for bushfire. Other response functions which may be applicable for a bushfire event are described in the QSDMP at section 8.2.3 and should be read in conjunction with this plan.


RE & RESCUE

TABLE 2:
RESPONSE FUNCTIONS

RESPONSE FUNCTION	DESCRIPTION	LEAD
State of Fire Emergency	Empowers Commissioner, QFES to take any reasonable measure to mitigate the fire emergency.	QFES
Commander – State Operations	Provides leadership and strategic decision-making to manage the bushfire response.	QFES
Declaration of an emergency situation	Provides overall control of the response if an emergency situation is declared under the *Public Safety Preservation Act 1986.*	QPS
Declaration of a disaster situation	Provides for the management of the response, if a disaster situation is declared under the *Disaster Management Act 2003*.	DDC
State Operations Centre	Manages and provides coordination to large scale bushfires. The centre also incorporates liaison officers from key stakeholders.	QFES
Fire Suppression and Control	The early detection and the correct application of weight of attack is critical to the successful control and extinguishing of a bushfire. A range of tactics and resources are coordinated to achieve successful control. Incident control is also established.	QFES (QPWS and DAF – can respond to and extinguish a fire on and to within 3km of the forest estate and QPWS on the protected area estate) (HQ Plantations – if a bushfire is occurring on their Plantation Licence Area or adjacent land) ** In the event lives or property is threatened, QFES will assume the lead agency role.*
Warnings	Warnings are provided to the community to enable them to make informed decisions regarding their safety in a bushfire.	QFES
Fire Weather Warnings	Warnings in relation to fire weather are provided during the response phase. These warnings inform decision making.	BOM
Fire Risk Forecasting	Fire risk forecasting systematically considers current fuels and forecast weather to provide a short-term outlook (out to six days).	QFES

Fire Behaviour Analysis	Provision of a short-term outlook including fire behaviour predictions.	QFES
Public Information	Information provided to the community to enable them to remain current with the response operation.	QFES and Land Managers (For those fires not managed by QFES or disaster management groups)
Traffic Management	Coordinating or restricting the movement of traffic enables the response operation and contributes to community safety.	QPS
Security of evacuated and damaged premises	During a bushfire event homes, businesses and other premises may be vacant for extended periods as result of evacuation or damage. Maintaining their security prevents offences and reassures the affected community.	QPS
Evacuation	For the safety of the community, an evacuation maybe required. Evacuation may be for a varied timeframe which is influenced by the behaviour of the bushfire. Evacuations may be directed. Authority for directed evacuations rests with those positions identified in the next column and is dependent upon legislation. During the response phase some community members may self or voluntarily evacuate.	QFES (Incident Controller) (QPS – if an emergency situation under the *Public Safety Preservation Act 1986* is declared) (District Disaster Coordinator through the relevant local disaster management group – if a disaster has been declared under the *Disaster Management Act 2003*)
Evacuation Centre	An evacuation centre is a building located beyond a hazard to provide temporary accommodation, food and water until it is safe for evacuees to return to their homes or alternative temporary emergency accommodation.	LDMG
Casualty Management	Provision of clinical services to treat injuries associated with burns, smoke inhalation and other injuries associated with a bushfire.	Queensland Health/Queensland Ambulance Service

KEY RESPONSE CONSIDERATIONS

Identification of the Land Manager

Coordination – identification and engagement of support entities

Multi-agency response – establishment of multi-agency incident management team

Communication – in (within response operation) and out (to the affected community and the wider public)

5.3.1 Decision Making

Effective decision making in response to bushfires will be supported by the framework described in section 8.2.4 of the QSDMP.

Decision making is underpinned by legislative authority, a system of event management, event reporting and technology.

5.3.2 Legislative Authority

The *Fire and Emergency Services Act 1990* provides the delegations and powers to enable the bushfire response.

To further enable the response, it may be necessary to make an emergency declaration. These declarations can be made under different legislation, dependent upon the circumstances, and are outlined below:

5.3.3 Emergency Declarations

Within the context of bushfire, emergency declarations can be made that enact additional powers for response to protect human life and property. These declarations may be enacted through the *Fire and Emergency Services Act 1990*, *Public Safety Preservation Act 1986* and the *Disaster Management Act 2003*.

FIRE AND EMERGENCY SERVICES ACT 1990

A State of Fire Emergency maybe declared by the Commissioner, Queensland Fire and Emergency Services with approval of the Minister for Fire and Emergency Services. This declaration invokes a number of restrictions, which are identified in the *Fire and Emergency Services Act 1990*. The declaration empowers the Commissioner, Queensland Fire and Emergency Services to take any reasonable measure to mitigate the fire emergency and removes the authority provided to any other entity through legislation to light a fire. The State of Fire Emergency remains in force for a specified period as determined by the Commissioner, Queensland Fire and Emergency Services.

The declaration is notified in the Queensland Government Gazette and throughout the state via newspaper, radio or television. QFES is responsible for the publication of this notification.

PUBLIC SAFETY PRESERVATION ACT 1986

An emergency situation may be declared under the *Public Safety Preservation Act 1986*. This declaration invokes a range of powers for police officers to effectively respond to the bushfire.

The QPS is responsible for making this declaration and the necessary notifications.

DISASTER MANAGEMENT ACT 2003

A disaster situation may be declared to enable the response to a bushfire.

Further information regarding disaster declarations can be found at section 8.2.4.1. Disaster Declarations of the QSDMP.

5.4 Event Management

To effectively respond to a bushfire, QFES utilises the Australasian Inter-Service Incident Management System (AIIMS).

AIIMS is a combination of facilities, equipment, personnel, procedures and communications operating within a common organisational structure with responsibility for managing allocated resources to effectively accomplish stated objectives relating to an incident.

Other entities involved in the response to a bushfire also utilise AIIMS to enable their operations.

Stakeholders who do not use AIIMS should ensure the incident management system utilised is capable of enabling efficient and effective response efforts.

5.5 Event Reporting

Event reporting is necessary to provide decision makers with real time situational awareness to enable effective operational decision making.

Situation reports must be provided to the Incident Control Centre (ICC). The ICC is responsible for providing situational reports to the Regional Operations Centre (ROC).

The ROC is responsible for developing a regional situational report, which outlines current operations, their status and items of strategic interest. This report is provided to the SOC.

The SOC develops a state report which is provided to the State Disaster Coordination Centre (SDCC), if activated.

In the event that the disaster management arrangements are activated, the ICC, ROC and SOC will provide situation reports to respective disaster management groups at the appropriate level.

Reporting may also occur through Queensland's disaster management arrangements. These reporting arrangements are outlined at section 8.2.4.4 – Event Reporting of the QSDMP.

Liaison officers located in control/operations centres may provide reports for internal use within their own agencies. Any information that supports the response effort is to be included in the control/operations centre situation report. This ensures a centralised and coordinated flow of information.

5.6 Technical Information

A range of technical information is available to inform decision making including:

- **Weather briefings:** These briefings are provided by the BOM and include information on current and future weather conditions. QFES has arrangements with the BOM for special weather forecasts for a particular incident to be provided
- **Predictive modelling:** Predictive modelling is provided in relation to fire behaviour during bushfire events. This information informs decision making regarding firefighting strategy and community safety strategies such as evacuations
- **Situational awareness:** A series of dashboards are available for use by bushfire management stakeholders to provide current information on bushfire events. These dashboards are administered by QFES.

5.7 Incident Response

5.7.1 Fire Detection

Early detection of fire is a key response priority. All bushfire management stakeholders have a responsibility to report a fire both planned or unplanned.

QFES is the coordinating entity for reporting and monitoring of bushfires. This is achieved by:

- Reporting all bushfires to QFES Fire Communications (FIRECOM) via Triple Zero (000), radio or QFES social media
- Immediately reporting any bushfires to FIRECOM that were initially directly reported to a responsible agency (for example QPWS)
- Ensuring QFES is informed by agencies responsible for managing land of bushfires occurring and provided with updates on bushfires for which they are providing a response.

5.7.2 Initial Response

Upon notification of a bushfire, FIRECOM will allocate appropriate resources in the first instance. The priority is to provide the quickest possible first response, as this approach can reduce the bushfire impact area.

For identification purposes, a bushfire will be allocated a name. This allocation will be determined by the incident controller.

5.8 Management of Incidents

5.8.1 Levels of Response

A bushfire in Queensland can be classified as one of three incident levels. The incident levels determine the response provided by QFES and other bushfire management stakeholders. The declaration of an incident level is a primary task for the incident controller. The incident levels and their potential characteristics and likely actions are outlined in Table 3: Incident Levels.

TABLE 3:
INCIDENT LEVELS

INCIDENT LEVEL	CHARACTERISTICS AND ACTIONS
Level 1	A level 1 bushfire is able to be resolved through the use of local or initial resources, generally small in size, of short duration and poses minimal threat and impact to the general community. Incident management is undertaken by the first arriving crew.
Level 2	A level 2 bushfire is one which exceeds the capacity of the local area to respond and requires wider support for sustained operations. The duration of the fire may be several days or of a significant complexity due to its proximity to population or critical risks. • Incident management team is established within Level 2, Incident Control Centre (ICC), comprising QFES and other stakeholders • Regional Operations Centre (ROC) established • Multi-agency response likely.
Level 3	A level 3 bushfire is one which exceeds the capacity of the local area to respond and requires significant support. There is the potential for multiple loss of life, significant impairment to infrastructure and significant disruption to the economy. The duration of the fire may be for several days or weeks and requires a high concentration of resources. • Incident management team established within suitable Level 3 ICC comprising QFES and other stakeholders • Full multi-agency involvement • SDCC activation • Disaster management arrangements activated.


RURAL
RURAL

5.8.2 Incident Control

QFES is the primary agency for bushfire except for:

Land managed by other agencies and organisations such as QPWS and HQ-Plantations. In these circumstances QPWS and HQ-Plantations will be the incident control agency for bushfire occurring on their estate. This occurs as both organisations have a Memorandum of Understanding with QFES, which outlines incident control protocols.

5.8.3 Incident Controller

An incident controller will be appointed for any bushfire in which a response is required. The incident controller must be suitably qualified to undertake this role. The incident controller is responsible for the overall management of the incident and the establishment of an incident management team.

The incident controller is supported by a Regional Commander and the Commander – State Operations.

The role of the Regional Commander is undertaken by a QFES Regional Assistant Commissioner unless delegated. The role of Regional Commander is to provide leadership and strategic decision making, undertake long-term planning and ensure coordination between incident controllers and the Commander – State Operations.

The Commander – State Operations is appointed by the Commissioner, Queensland Fire and Emergency Services as outlined in Chapter 4 – Preparedness. The role of Commander – State Operations is to provide strategic leadership and decision making, while engaging closely with the Regional Commander/s to coordinate response/s across the state and interstate.

5.8.4 Incident Management Teams

Incident management teams provide support to the incident controller by undertaking functions such as planning, intelligence, public information, operations, investigation, logistics and finance. Personnel undertaking roles within these functional areas are required to complete appropriate training.

Incident management teams may consist of personnel from different agencies to make the best use of available capabilities and facilitate situational awareness, the response function and operational coordination.

5.8.5 Liaison Officers

Liaison Officers are a vital link between QFES and other organisations which may be able to assist in the response to a bushfire. The representatives of these organisations should be sufficiently qualified to provide advice and commit resources where required to incident controllers, the Regional Commander or the Commander – State Operations.

Provision is to be made for liaison officers within operations centres at all incident levels.

The duties of a liaison officers are described at section 8.2.1.4 – Disaster Coordination Centres of the QSDMP.

5.9 Public Safety

Public safety is a key principle of the Plan and focuses on the priority to protect and preserve human life. This priority will be met by focussing on five areas:

1 Bushfire warnings
2 Evacuations
3 Traffic management
4 Restriction of access and security
5 Disaster Management Groups.

5.9.1 Bushfire Warnings

QFES is responsible for bushfire warnings. This includes composition and distribution of warnings. Bushfire management stakeholders and partner agencies are to refer community inquiries relating to bushfire warnings to QFES social media channels and website when sharing bushfire warnings.

Bushfire warnings provide point-in-time information about a bushfire that is – or is expected to – impact a community. The information describes the impact and expected consequences and includes advice on what action should be taken by community members. These warnings are developed in accordance with the *Public Information and Warnings Handbook*.

In Queensland three levels of warning are utilised. These levels are:

- **Advice:** A fire has started and there is no immediate danger, this is general information to keep you informed and up to date with developments.
- **Watch and act:** There is a possible threat to lives and homes. Conditions are changing, you need

to be aware of your situation and take action to prepare and protect yourself and your family. At this stage you will be asked to either prepare to leave or leave now.

- **Emergency warning:** You are in danger as your area will be impacted by fire. You need to take immediate action to survive. You may be asked to leave immediately and seek shelter or seek shelter immediately if conditions have become too dangerous for you to leave.

The decision to issue a bushfire warning is the responsibility of the incident controller. In circumstances where QFES is not the incident controller, QFES will enable the issuing of the required warning after consultation. This decision may be made in consultation with relevant stakeholders. In the event that disaster management groups have been stood up, these groups must be informed of the imminent release of a bushfire warning to enable coordination between the firefighting response and broader disaster management operations.

In the case of imminent or severe threat to a specific Queensland community, an Emergency Alert may be issued. QFES is the authorising agency for Emergency Alerts. Further information regarding Emergency Alerts can be found at section 4.11.2 – Emergency Alert of the QSDMP.

In some circumstances the Standard Emergency Warning Signal (SEWS) may be utilised. SEWS is the responsibility of QFES and the BOM. Further information regarding SEWS can be found at section 4.11.3 – Standard Emergency Warning Signal of the QSDMP.

Public information separate to warnings is coordinated by public information officers, which are located at operations centres at the incident, regional and state level. Coordination and consistency of public information is a key element for response and will be enabled through liaison between Operation Centres coordinating the firefighting response and relevant disaster management groups.

In the event a disaster declaration is made, responsibility shifts to the relevant disaster management group. At the state level this may result in the activation of the Crisis Communication Network and the Public Information capability within the SDCC. These arrangements are outlined in chapter 4 – Public Information of the QSDMP.

5.9.2 **Evacuations**

Evacuation is the planned movement of persons from an unsafe or potentially unsafe location to a safer location and their eventual return.

Community members may evacuate in three types of circumstances:

1. **Self-evacuation** – residents self-initiate their movement to safer places based on forecasts
2. **Voluntary evacuation** – residents self-evacuate in response to information provided by QFES and other stakeholders such as local government
3. **Directed evacuation** – residents are directed to evacuate from an exposed area or part of an area by authorised officers pursuant to legislation such as the *Fire and Emergency Services Act 1990, Disaster Management Act 2003* and *Public Safety Preservation Act 1986*, which provide the legislative power for directed evacuations to occur.

The options for emergent evacuations in the event of a bushfire are as follows:

1. In a bushfire response, where a disaster or emergency situation has not been declared, the incident controller is responsible for making the decision to evacuate, pursuant to the *Fire and Emergency Services Act 1990*. Where possible this decision should be made in consultation with other supporting agencies and relevant DMGs (if activated).
2. In the event that an emergency situation is declared pursuant to the *Public Safety Preservation Act 1986*, the QPS Emergency Commander authorises any necessary evacuation in consultation with other supporting agencies and relevant DMGs (if activated).
3. In the event that a disaster situation has been declared, the District Disaster Coordinator (DDC) authorises any directed evacuations and exercises any statutory powers pursuant to the *Disaster Management Act 2003*, which are required to enable the evacuation, in consultation with the LDC of the relevant DMG and other supporting agencies.

The location of evacuation centres and "places of refuge" should be outlined within the Evacuation Sub-Plans of the LDMP.

5.9.3 Traffic Management

The QPS is responsible for traffic management. Effective traffic management facilitates the safe and efficient movement of emergency vehicles involved in response and protects the public from danger.

Local government assists the QPS with road closures of locally controlled roads, through signage and notifications.

The Department of Transport and Main Roads assists in road closures and traffic management on state-controlled roads through signage and notifications.

The State Emergency Service (SES) assists with traffic control duties where appropriate.

5.9.4 Restriction of Access and Security

The incident controller is responsible for determining access to the fire ground. In the event an area is declared a crime scene, such area is the responsibility of the QPS.

The QPS will assist the Incident Controller in restricting access to the fire ground and at-risk areas.

The QPS is responsible for security operations in evacuated/damaged fire areas.

5.9.5 Disaster Management Groups

Disaster management groups may adjust their activation level (alert, lean forward, stand up) during a bushfire. These groups have plans and arrangements in place, which contribute to public safety within their community and are to be considered when conducting bushfire response operations.

Disaster management groups must be consulted and provided with timely information, when bushfires are occurring within their respective area. This approach may be undertaken through the positioning of liaison officers in operation/coordination centres or other arrangements as determined by respective disaster management groups.

5.10 Bushfire Investigation

Understanding the cause of bushfire informs future planning and response strategies. QFES is responsible for bushfire investigation. This investigation is undertaken by suitably qualified bushfire investigators. The primary focus of a bushfire investigation is the determination of the cause and origin of the fire. Investigators will also determine if any relevant legislation has been breached and make recommendations for prosecution.

The triggers to undertake bushfire investigations can include:

- A bushfire that is suspicious or has been deliberately lit
- A bushfire with an incident-related fatality or serious injury to a firefighter or member of the public
- A bushfire that has caused substantial damage or loss to property and infrastructure. This can include loss of crops, pastures and livestock, loss of or damage to buildings, fencing and other farm infrastructure as well as sites of cultural or environmental significance
- A bushfire that has caused significant community issues
- A large-scale bushfire that has crossed a state or territory border
- The cause of the fire is unknown
- There is a pattern of fire ignition in a defined geographical area that warrants concern and scrutiny.

A bushfire investigation can also be instigated by the QPS. In such circumstances, the QPS will work in collaboration with QFES. Where the origin of a bushfire involves electricity network assets, then bushfire investigations will include the relevant electricity entity and the Electrical Safety Office.

6 Recovery

Recovery is the coordinated process of supporting disaster-affected communities' psychosocial (emotional and social) and physical well-being; reconstruction of physical infrastructure; and economic and environmental restoration (including regeneration of the natural environment, associated infrastructure and heritage sites and structures, and the management of pollution and contamination).

The QSDMP and the **Queensland Recovery Plan (2017)**[18] are key guidance instruments for optimal recovery outcomes for impacted communities. These plans articulate key principles for disaster recovery and emphasise the importance of locally-led recovery for community cohesion and sustainable recovery. The Queensland Recovery Plan acknowledges that local governments, through Local Disaster Management Groups (LDMGs), Local Recovery Groups and their communities, are best placed to understand and identify their recovery needs.

The Queensland Reconstruction Authority (QRA) is responsible for the coordination of the state's recovery operations following major bushfire events and is supported by functional recovery groups, each chaired by the Director-General of those agencies with lead functional recovery responsibilities.

6.1 Impact Assessment

The QRA also coordinates impact assessments, which include identifying priority needs and risks, assessing the capacity to recover and identifying appropriate forms of recovery assistance.

The Damage Assessment and Reconstruction Monitoring System (DARMsys) is used to monitor Queensland's rebuilding progress. In the immediate aftermath of a bushfire, QFES undertakes damage assessments in the community using a hand-held monitoring device to provide map-based damage data.

DARMsys information is shared with Queensland Government agencies and councils to identify the scale and scope of disaster impacts and plan their recovery response. In particular, the Department of Communities, Disability Services and Seniors (DCDSS) uses damage assessment information to target assistance to vulnerable people and communities in need.

QRA monitors the progress of reconstruction through subsequent reconstruction monitoring audits, focusing on damage and recovery progress of habited structures and dwellings.

Annex 3 of the Queensland Recovery Plan outlines the specific functions of each Functional Recovery Group. These groups are often responsible for assessing and monitoring different disaster impacts to inform recovery. For example, the Environment Recovery Group identifies and monitors actual and potential impacts on the environment from disasters and the associated operations required to support recovery, and the Building Recovery Group assesses impacts to buildings to assist recovery efforts and monitor recovery progress across the impacted area.

6.2 Recovery Planning

QRA supports local governments to develop event-specific recovery plans and develops state event-specific recovery plans with support from Queensland's functional recovery groups (human and social, economic, environment, building, and roads and transport).

Examples of general recovery issues that are likely to be relevant in bushfires include livestock and debris removal (including hazardous debris such as asbestos), fencing repair, insured and non-insured properties, road access, essential public asset restoration, tourism recovery, mental health support, and wildlife and habitat recovery.

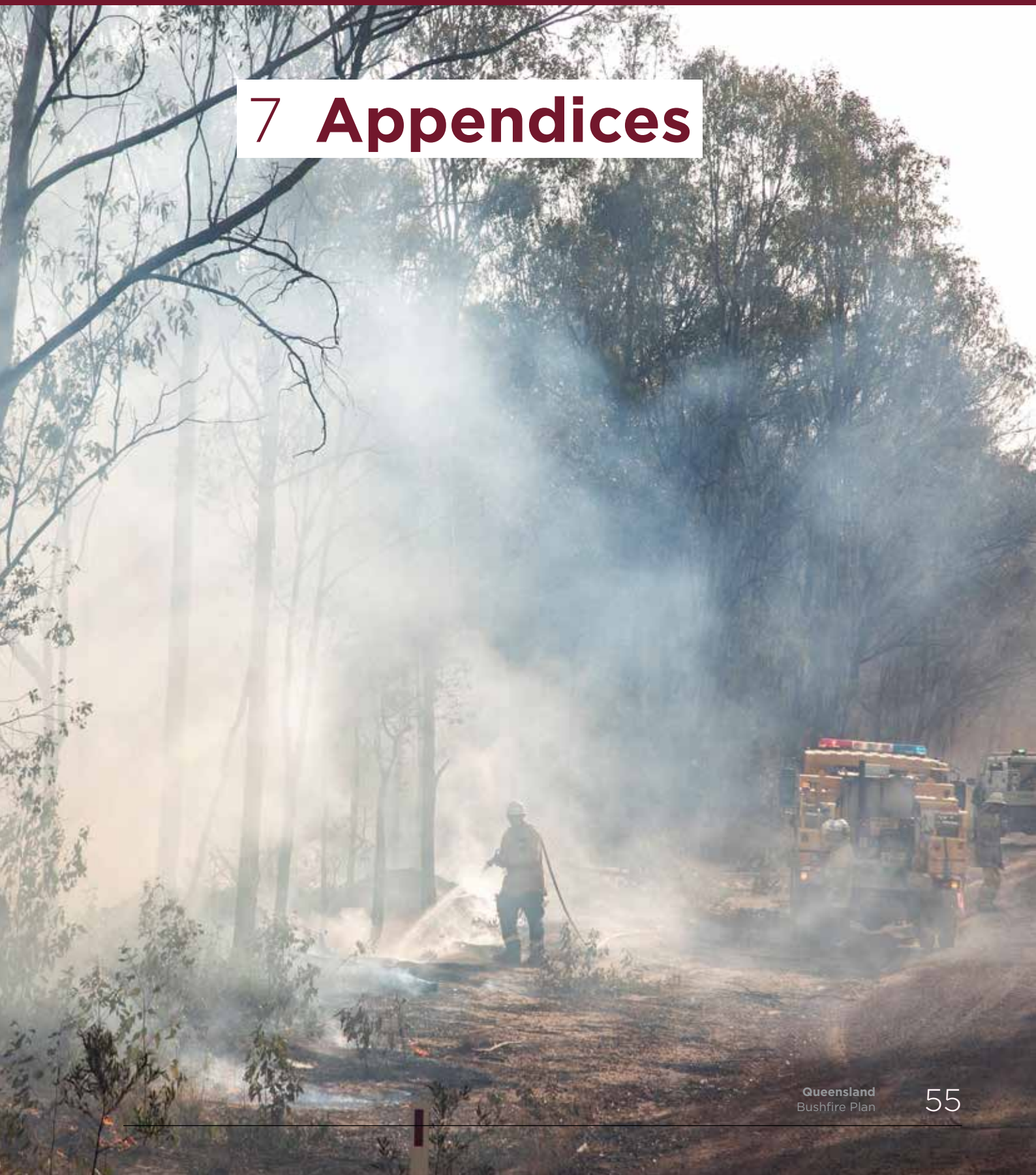
6.3 Post-recovery evaluation

To evaluate the effectiveness of recovery planning and operations, all stakeholders should conduct assurance activities. Exercises and after-action reviews are also integral to informing improvements for community recovery.

A broader evaluation focuses on the effectiveness of recovery programs to achieve desired outcomes. The findings and recommendations from these activities assist in the identification of good practice and opportunities for improvement in disaster recovery. They can be shared with all disaster management groups and key stakeholders at the local, district and state levels.

QRA coordinates progress reporting for published, event-specific recovery plans. The reports highlight progress against recovery objectives at the local and state level.

7 Appendices



APPENDIX A
BUSHFIRE RISK ASSESSMENT
(Drawn from the State Natural Hazard Risk Assessment 2017)

7.1 Potential exposures

Assessing hazard interaction and the impact of hazard characteristics on exposed elements provides a clear understanding of a region's or community's vulnerabilities. This risk assessment highlights those elements susceptible to the characteristics of the hazard under the current climate.

For the purposes of the State Natural Hazard Risk Assessment 2017, the potential impact from bushfire has been assessed against the occurrence of general bushfire activity in the landscape. This broad assessment has been partially updated to include learnings from the bushfires of 2018 and 2019 and is applicable for the whole of Queensland. However, it should be applied and tailored at a local level by considering the general behaviour of bushfire in the landscape and historical observations.

The impacts that may be currently expected, and which may intensify with the projected increase in frequency, intensity and duration of bushfires, will be explored in greater detail within planned future assessments of the hazard and risk.

The impacts of severe and extreme bushfires are likely to affect all sectors of Queensland's communities, from the public to government organisations and industries, health, utilities, commerce, agriculture, and infrastructure.

The critical observations for communities across Queensland to consider are presented below according to the six exposed element categories outlined within the Queensland Emergency Risk Management Framework (QERMF).

This list is not exhaustive, and all the elements highlighted will not be applicable to every local government area (LGA) within Queensland.

7.1.1 Essential Infrastructure

POWER

Where power infrastructure transects areas of dense or continuous vegetation there is increased exposure related vulnerability to potential bushfire impact. Some areas have seen short term, localised periods of disruption to the network due to direct impact from fire to power poles, substations, and indirect impact from rising ash and embers causing powerlines to arc and short at key points across the network.

Generally, risk management and mitigation strategies employed by infrastructure asset owners and operators in conjunction with Area Fire Management Groups (AFMGs) and Local Disaster Management Groups (LDMGs), reduces the vulnerability of the network to this hazard.

There are three main types of power interruptions that can occur during a bushfire dependant on location, scale and time of impact:

1 **Localised outages** – impacting a few to several thousand households, these occur due to multiple factors and are likely to result in short-term interruption to supply. Single-Wire Earth Return (SWER) lines and older infrastructure across Queensland are vulnerable due to a lack of resilience against sustained high temperatures and direct attack.

2 **Power system disturbance** – occurs when a major event disturbs the power system, most frequently caused by a sudden interruption to critical transmission lines. In Queensland, system disturbance can be expected due to smoke causing short circuiting, or severe wind or bushfire damaging transmission lines and infrastructure.

3 **Involuntary load shedding** – if there is not enough power to meet demand, sections of the grid will be switched off until supply can be restored, or demand reduces.

The likelihood of involuntary load shedding may increase if impacts to the network have been sustained elsewhere within the network, such as loss of transmission lines due to a bushfire.

COMMUNICATIONS

There are multiple key telecommunication assets (masts, towers etc.) across Queensland located within topographically high areas. These assets act as a "backbone" to the telecommunications network providers, facilitating greater coverage of service for Queensland's communities. However, this leaves the infrastructure vulnerable to exposure from bushfire impact (which is also exacerbated by the topography) as the majority of these locations are in natural bushland, national parks etc.

Indirect impacts to the communications network may occur if the local power network is impacted with sporadic communication outages likely dependent on the level of redundancy available. It is important to note that the efficiency of battery redundancy reduces – by upwards of 50 per cent in extreme cases – with exposure to severe or extreme heat.

WATER

Recent assessments of the hazard have identified water infrastructure exposure to bushfires to be anywhere from minor to extreme. Whilst most infrastructure operators employ effective mitigation strategies to ensure assets are as safe from general bushfire impact as possible, the scale of the high-intensity bushfires observed in recent years have highlighted significant impact to water network is highly likely. These risks should be managed or mitigated by the local or regional water service provider i.e. Seqwater, Sunwater, or Local Government.

Bushfires have the potential to degrade water quality and alter the dynamics of stream ecosystems in many complex ways.

Most critical effects occur if there is heavy rain soon after fire, as loss of vegetation and altered soil structure can make fire-affected soils more erodible. Runoff can carry sediments and pollutants that affect aquatic environments, drinking water quality and agricultural industries.

The degree to which water quality is affected by fire depends on factors such as:

1 Geographical features and size of the catchment

2 Size and extent of the fire

3 Time period between the last fire and a significant rainfall event

4 Type of surrounding vegetation, soil and erosion.

High intensity fires can cause enormous damage to water catchments by destroying ground cover and changing hydrology, as well as altering the structure, behaviour and erosion of soil. The loss of riparian vegetation may result in high volumes of sediment (measured as turbidity) entering the stream and

may also increase stream temperatures due to a lack of shade.

Chemical reactions triggered by fire can release nutrients, metals and other toxicants stored in vegetation and soil. Rainfall after a fire washes these contaminants into waterways and reservoirs, which can have substantial implications for agriculture, human safety and amenity.

Use of affected water may be unsafe for agriculture or human consumption without additional treatment or alternative water sources may have to be found.

Indirect disruption has been observed in the short term when power has been affected. Loss of power can result in the shutdown of water treatment plants and, depending on the availability of reserves in the system, may require the issuing of boil water notices.

7.1.2 Access and Resupply

Transport infrastructure situated in I-Zone locations may be vulnerable to bushfire impact either through direct or indirect impact. Local Government owned infrastructure is managed within local disaster management planning, however risk management of state-owned assets (roads and bridges) is managed by the Department of Transport and Main Roads in conjunction with local arrangements i.e. AFMGs and LDMGs.

In incidents of large-scale bushfire occurrence where infrastructure may be exposed to severe bushfire conditions, disruption to roadways and road structures (e.g. bridges, overpasses and signage) should be expected.

Short to medium term (days to weeks) disruption periods have been observed during these incidences. Direct and indirect impact to air, road and rail networks (including ember attack, smoke reducing visibility etc.) has led to disruption in access to areas for the general community, emergency services and the supply chain. Disruption can be reduced if alternate routes or traffic management plans are available and enacted. There are significant costs for repair or return of services associated with direct impact.

During response, understanding the rate of spread and the potential for imminent impact and closure of access corridors is critical when considering or enacting any evacuation of threatened communities.

7.1.3 Community and Social

Whilst the general population is unlikely to be directly impacted in anything other than high-intensity, large scale bushfires, as with 2018 and 2019, there are some rural and remote communities in isolated areas which are highly vulnerable to general bushfire occurrence. These small, populated locations are at times off the grid and located in densely vegetated areas presenting a significant challenge for bushfire risk management.

I-Zone areas within remote Indigenous communities and townships comprised of a mix of ethnically, culturally and socio-economically diverse groups, who at times are reliant on social media and word-of-mouth for emergency alerts, are vulnerable to loss of communications across the State which may result from bushfire occurrence.

Built up areas established in locations surrounded by dense or continuous vegetation (e.g. mountainous suburban areas) also are highly vulnerable to exposure.

These types of I-Zone areas are significant focus areas for key messaging and preparedness activities undertaken by QFES and LDMGs due to their restricted access and egress routes and proximity to high fire risk areas. This is especially pertinent where planned mitigation activities have had limited success in or opportunities to manage fuel loads etc.

DEMOGRAPHICS AND VULNERABLE POPULATIONS

Social isolation of vulnerable people also presents issues within the community. Some vulnerable people do not understand bushfire risk and may not be informed of support services available to increase their individual resilience. Cultural and linguistic barriers can also exist which increases social isolation and vulnerability to bushfires.

Inconsistent messaging regarding impending bushfire impact often causes confusion. Provision of services and advice to people by multiple agencies can result in them being contacted numerous times, sometimes with conflicting information.

Those who have recently migrated to Queensland from areas with significantly different climates are at extreme risk, especially those from temperate climates. This risk increases with recent migrants and tourists for whom English is not the primary language and comprehension of key messaging is poor.

Tourists to Queensland may not be prepared for the extreme climatic conditions in the State, including bushfires which have an increased likelihood in peak tourism season. While bushfires may affect all people, residents tend to be more accustomed to and better prepared for bushfires, particularly in terms of taking appropriate action to prepare and respond.

Aged care facilities and services, together with their residents, have experienced significant impact during large-scale bushfires with incidences of poor telecommunications and therefore messaging, issues with consumable supply chains, and in extremis, full evacuation of sites for the safety of staff and residents. The majority of these issues have resulted from limited business continuity planning with respect to natural hazards and can be resolved through development of better preparation and response measures within the aged care sector.

EMERGENCY MANAGEMENT

During days of severe to extreme fire danger, bushfires can become uncontrollable even if fuel levels are minimal. Heatwaves can dramatically increase underlying bushfire risk to potentially extreme levels. Any resultant bushfire occurrence would add significant pressure to local and regional emergency management capability and capacity and increase the risk of impact to the community.

Climate change and the increasing frequency of heatwave events is increasing the length of fire seasons, which limits the opportunities for prescribed burning.

Usual mitigation efforts are less likely to impact bushfires during extreme, and compounding conditions, for example drought, high winds and heatwaves.

The risk of heat stress and heat stroke for emergency service personnel is managed under operational health and safety guidelines. However, it has been noted that compound extremes, such as simultaneous bushfires and heatwaves, may result in operating thresholds being exceeded faster than normal.

7.1.4 Medical, Public and Mental Health

Exposure to smoke from fires can worsen asthma and other respiratory conditions, cause coughing and shortness of breath and irritate the eyes, nose and throat. Large particles in bushfire smoke irritate the eyes, nose, throat and lungs. The finer particles can penetrate deep into the lungs and are more harmful.

Other health hazards from bushfires include extreme heat, physical injuries such as burns, heat stress and dehydration.

These indirect effects lead to increased mortality rates among older populations and medically dependent persons with pre-existing conditions. Understanding comorbidity associated with smoke exposure (from planned burns or otherwise) is acknowledged as an issue within the Health Sector requiring further study and action.

Those at greatest risk of harm from bushfire smoke are:

- people with respiratory disease, especially asthma, but also emphysema, chronic bronchitis or allergies
- smokers
- people with heart disease
- children
- the elderly.

Individuals have a different response to smoke affecting their properties with some tolerating a greater level of exposure while others will not tolerate even minor levels of exposure. Individuals with underlying health problems (as outlined above) will be most sensitive to smoke.

For some people, leaving their home during a bushfire may not be viable due to mobility or transport issues. This may exacerbate their vulnerability, especially for those with pre-existing morbidities.

Health assets and infrastructure in built up, remote and rural townships that interact with I-Zone areas have a moderate level of exposure and vulnerability to bushfire hazard. Primary concerns relate to loss of essential services (power, communications and water) as well as smoke impact.

Queensland Health (QH), in consultation and collaboration with QFES, HHSs, the Queensland Ambulance Service (QAS), other key stakeholder agencies, and the State Disaster Coordination Centre (when activated), will establish briefings, provide consistent information for public messaging and advice for other agencies.

These may include other emergency services, disaster management groups, St John Ambulance (Qld), the Pharmacy Guild, the Royal Australian College of General Practitioners, the Commonwealth Department of Health regarding aged care facilities and the Australian Red Cross, as well as other non-government organisations with a community care focus. Through these networks,

and through HHSs and Primary Health Networks, aged care facilities, private hospitals, community health care providers and pharmacies, QH can ensure identification and distribution of messaging to vulnerable groups across Queensland. QH will also monitor and provide advice on the public health risks associated with effects of bushfire and heat on infrastructure, particularly if power generation is affected.

Arrangements are also in place to provide additional resources to hospitals as needed to ensure ongoing care of the community. Hospitals have plans in place to manage any potential surge of patients and consider specific clinical pathways and management plans for high risk groups.

Long term observations of the effects of natural disasters, accompanied by persistent drought and water restrictions have demonstrated marked effects on the mental health of both rural and urban communities, with increases in the incidence of episodic or chronic stress, despair and depression, and health-damaging personal behaviours.

There is also a damaging perception of 'inherent resilience' within regional Queensland communities, often depicted as 'stoic' and 'well-adapted' to the impacts of natural disasters. While many of these communities have good levels of resilience, this depiction can hinder the development of effective mental health adaptation strategies.

7.1.5 **Significant Industries**

Agricultural areas across Queensland have sustained stock and crop losses from direct exposure to significant bushfires. Additionally, associated infrastructure such as stock fencing, bulk storage areas (grain silos, cotton stores etc.) and, in some locations, cattle yards have and may continue to be significantly impacted. The impacts of bushfire to these locations and industries have had and are likely to continue to deliver medium to long-term disruption and economic impact. Recovery within agricultural sector can be protracted, especially if the area is already experiencing impacts associated with other natural hazards such as drought or floods.

Queensland's forestry industry is highly vulnerable to exposure from bushfire hazard due to the nature of the industry. Loss of equipment, infrastructure, and timber at a significant scale can cause long term disruption to the industry with significant flow on impacts to local and regional economies.

Underground mining locations across Queensland rely on surface air vents to supply clean air to workers who are at times located at significant depths below-ground. Air intakes are vulnerable to impact from exposure of smoke in air vents produced in a bushfire hazard. This has and can cause short term disruption to production of those mines due to essential evacuations of the underground workers.

The mining industry works well with local authorities to mitigate fire exposure hazard and at times assists with resources for response and recovery.

7.1.6 **Environmental**

Areas of dense or continuous vegetation have shown consistency in being the high exposure areas across the State to bushfire. Uncontrolled burns in these areas have led to significant natural bushland areas being impacted by bushfire.

Intense bushfires cause the death, by incineration or smoke suffocation, of large numbers of native animals and insects that are unable to avoid the flames. Microsites (i.e. small areas of different nature from the general area) that do not burn under low intensity burns are incinerated and there are thus no refugial areas left for fire sensitive flora or fauna, or for subsequent recolonisation after the fire.

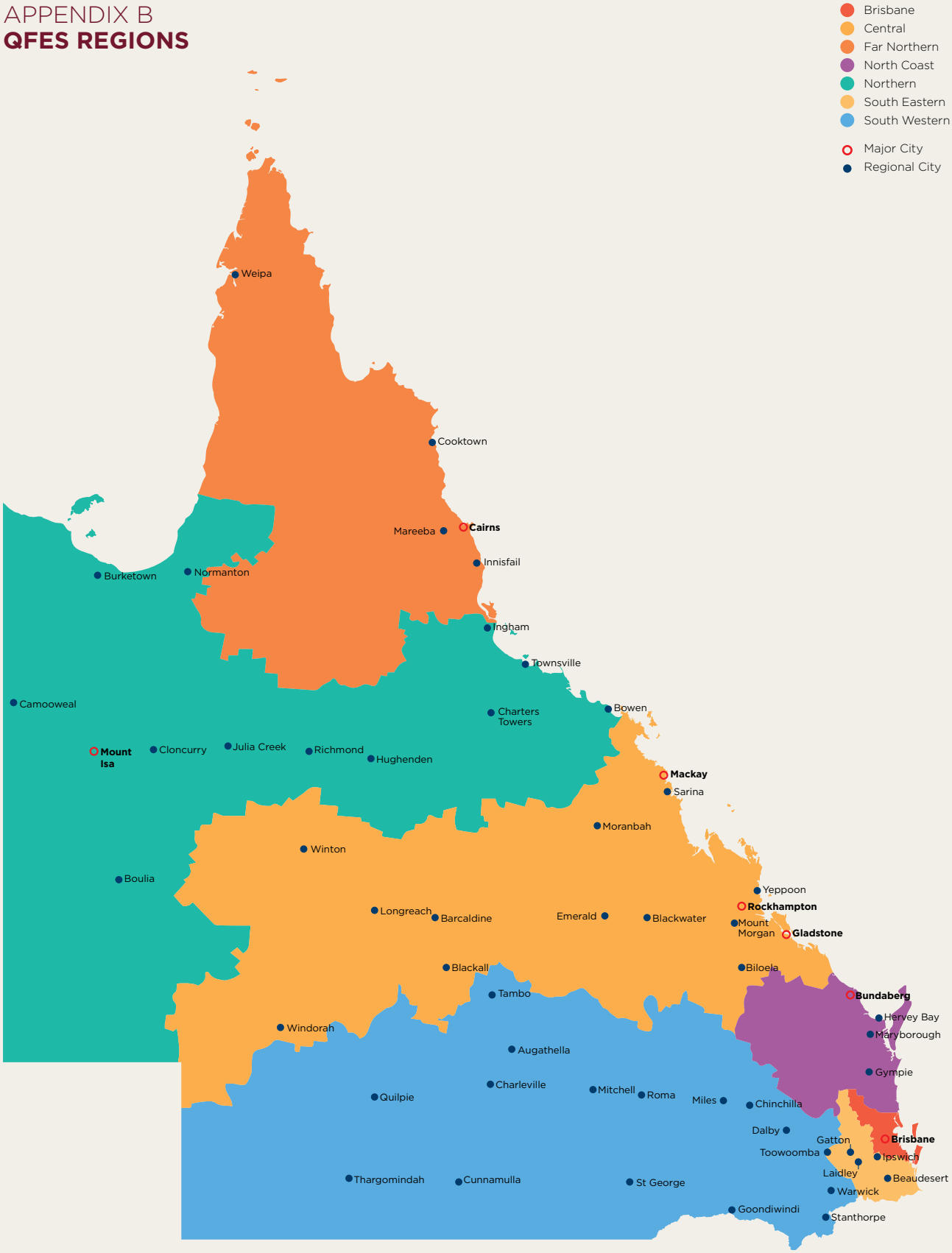
Any animals that are able to take refuge in holes in the ground or in logs are usually quickly lost after a bushfire as they no longer have any cover from predators.

Local food chains can also be affected by loss of riparian vegetation after a fire, which leads to:

- higher water temperatures
- increased light availability
- loss of habitat
- reduced protection from predators for instream biota.

Combined with increased contaminant loading, increased water temperature can trigger greater breakdown of organic matter by bacteria, which may deplete oxygen levels in the water. Fish suffocation is a common result of this sudden depletion of dissolved oxygen.

APPENDIX B
QFES REGIONS



APPENDIX C
BUSHFIRE MANAGEMENT ROLES AND RESPONSIBILITIES

QUEENSLAND FIRE AND EMERGENCY SERVICES (QFES) – PRIMARY AGENCY FOR BUSHFIRE

- Delivery of bushfire mitigation programs
- Development of bushfire guidance material
- Establishment and management of fire management groups
- Coordinate and develop Bushfire Risk Mitigation Plans
- Maintenance of the Fire Warden network
- Management of the Permit to Light system
- Invoking fire bans
- Declaring a State of Fire Emergency
- Undertaking enforcement actions
- Assisting land managers to undertake prescribed burns
- Community engagement
- Serving hazard reduction notices
- Development and distribution of fire risk forecasting
- Assessment of Neighbourhood Safer Places
- Maintaining the State Operations Centre
- Maintaining a firefighting capability
- Incident control (Level 2 and 3 incidents)
- Fire suppression and control
- Coordination of air operations
- Development and dissemination of bushfire warnings
- Determining access to the fire ground
- Bushfire investigation.

BUREAU OF METEOROLOGY

- Development and dissemination of fire weather forecasts
- Development of fire danger ratings (in consultation with QFES)
- Provision of specific forecasts for particular fires.

DEPARTMENT OF ENVIRONMENT AND SCIENCE (QUEENSLAND PARKS AND WILDLIFE SERVICE)

- QPWS manages more than 13 million hectares of parks and forests, equating to about 8% of Queensland and containing about 14% of mapped bushfire prone lands
- Management of more than 400 state forests and timber reserves, over 600 protected areas including national parks, conservation parks, resource reserves and forest reserves, and seven recreation areas.
- Development and implementation of fire management programs for the protection of life and property and for the maintenance of natural and cultural values on parks and forests
- Lead firefighting on national parks, conservation parks and state forests, where there is no threat to life or property
- Identification of fire management zones within the estate
- Maintenance of a firefighting capability which consists of firefighting equipment, personal protective equipment, and rangers trained in forest and grassland firefighting
- Coordination, cooperation and active participation across boundaries in constructing and maintaining fire lines, burn notification, arranging access to property, training in fire management, undertaking burning operations and developing bushfire response plans
- Identify, prioritise and implement recovery actions for threatened species severely impacted by bushfires
- Cultural heritage management on protected areas and forest estate
- Review and input into event-specific recovery plans
- Air quality monitoring
- Fire scar mapping
- Climate change transition and adaptation.

DEPARTMENT OF HOUSING AND PUBLIC WORKS

- Administration of the *Building Act 1975*
- Setting minimum building requirements
- In the context of bushfires this responsibility includes:
  - Contributing to the development of the National Construction Code (NCC) and AS 3959 that set out minimum requirements for new buildings and significant renovations of existing buildings located in bushfire prone areas
- Administration of the Queensland Development Code, that can impose requirements over and above the NCC and AS 3959.

DEPARTMENT OF NATURAL RESOURCES, MINES AND ENERGY

- Responsible for more than 19,000 parcels of land across the state, totalling in excess of 940,000 hectares, with 9,519 of those parcels being within the urban interface
- Managing underlying risk level relating to fire on DNRME land
- Complying with legislative responsibilities under the *Fire and Emergency Services Act 1990* to effectively manage risks associated with DNRME land
- Administering the *Vegetation Management Act 1999.*

DEPARTMENT OF TRANSPORT AND MAIN ROADS (TMR)

- The Department of Transport and Main Roads (TMR) is responsible for a vast estate, including over 33,000 kilometres of operational state-controlled road (SCR) network and its supporting state-controlled road corridor and all the rail land in Queensland.

STATE-CONTROLLED ROADS

- The Department's bushfire risk management program is responsible for the management of bushfire risk within the SCR corridor. The objective of the program is to reduce the chance of bushfire ignition and spread from the SCR corridor by the identification and modification or removal of bushfire fuel hazard.
- The Department manages third party access for bushfire fuel management within the SCRR corridor through the Road Corridor Permit (RCP) system. RCPs typically include a requirement for applicants to obtain a Permit to Light from QFES. While the RCP will allow access to the SCRR for fuel management it does not authorise the lighting of a fire as this is authorised by the QFES through the Permit to Light.
- Management of roads and road reserves which are not state-controlled fall within the scope of local councils or other agencies.

STATE-CONTROLLED RAIL LAND

- Management of closed rail corridors, where Queensland Rail has no interest in the land or any remaining infrastructure such as bridges
- Generally, if the Department enters into an access arrangement with a third party, it is the third party's responsibility to maintain the land, including vegetation management. Where the Department has not entered into any access arrangements, the Department will maintain the land in townships only.
- For vegetation management of closed rail corridors outside townships, TMR will action upon request but only up to 50m from an adjoining owner's residence or other structures.

OTHER ROLES

- The Department does not have an operational response role
- The Department provides Liaison Officers for the State Disaster Coordination Centre (SDCC)
- The Department undertakes strategic engagement with Queensland Reconstruction Authority (QRA) and review of/input to event-specific recovery plan
- The Department Chairs the Roads and Transport Functional Recovery Group (FRG) if required.

ENERGY QUEENSLAND LIMITED (EQL)

- Establishing and communicating high level plans for the mitigation of EQL's electrical asset-initiated bushfire risks, so far as is reasonably practicable
- Engaging with internal and external key stakeholders, subject matter experts and technology to inform EQL's understanding of bushfire risks
- Establishing and maintaining memorandums of understanding with QFES and having emergency management arrangements in place with local state and federal governments

- Undertaking risk assessments and having dedicated internal governance and operational structures to ensure bushfire risk management is properly considered as part of EQL's all-hazards approach to resilience
- Developing and implementing EQL specific plans and processes to manage bushfire risks as part of its all-hazards approach to summer preparedness, also taking into account assets, locations and changing weather and environmental conditions. EQL's bushfire management approach is reviewed and refreshed annually with appropriate governance and oversight structures in place
- Developing and implementing network asset management and bushfire mitigation strategies
- Regularly review emergency response practices to ensure currency and the consideration of interagency cooperation
- Ensuring that EQL employees attend bushfire risk treatment related training and subsequently seek to implement learnings to bushfire risk management plans.

ELECTRICAL SAFETY OFFICE

- Administer *Electrical Safety Act 2002*
- Electrical safety regulator of Queensland's prescribed electricity entities, other electricity entities and electrical license holders
- Oversight for the management of electrically initiated bushfire risk.

HQ-PLANTATIONS

- Control, prevention and management of fire on the Plantation Licence Area
- Development of Plantation Licensee Fire Management Plan
- Establishment of Plantation Rural Fire Brigade.

LOCAL GOVERNMENT

- Administration of local planning scheme
- Administer building standard approvals and compliance
- Mitigation of bushfire risk
- Maintain bushland areas owned and managed
- Identify and report residual bushfire risk
- Communication to the local community
- Vegetation Management.

PERSONS/BUSINESSES WHO OPERATE OVERHEAD ELECTRICITY NETWORKS (AURIZON, ENERGY QUEENSLAND, ESSENTIAL ENERGY, POWERLINK, QUEENSLAND RAIL, RTA WEIPA)

- Assess and manage bushfire risk throughout their network
- Develop and undertake bushfire mitigation activities.

POWERLINK

- Long term member and participation in coordinated QFES led fire risk management activities
- Long term membership and participation in the **Queensland Fire and Biodiversity Consortium**[19]
- Development and implementation of organisational and targeted fire risk mitigation measures
- Establishing and maintaining a Memorandum of Understanding with QFES on bushfire mitigation and bushfire response in Queensland
- Internal formal Powerlink Bushfire Mitigation Working Group
- A FREECALL number (1800 353 031) that is available 24 hrs, 7 days a week for planned firefighting near its high voltage network
- Email enquires can be directed to **website.enquiries@powerlink.com.au** or general advice is provided on **www.powerlink.com.au/electrical-fires**[20]
- Public information is maintained to assist with fire management near transmission lines:
  - Fire and High Voltage Transmission line safety: **www.powerlink.com.au/reports/fire-and-high-voltage-transmission-line-safety**[21]
  - Powerlink Queensland Activities on an Easement: **www.powerlink.com.au/reports/activities-easement**[22]
  - Burning Sugar Cane near t ransmission lines: **www.powerlink.com.au/reports/burning-sugarcane-near-transmission-lines**[23]
  - Property Fire Management Planning Kit, Powerline Easements, Fire and Biodiversity Supplement: **www.fireandbiodiversity.org.au/publications.html**[24].

QUEENSLAND POLICE SERVICE (QPS)

- Traffic management
- Declaration of an emergency situation if necessary, pursuant to the *Public Safety Preservation Act 1986*
- Emergency Commander, upon declaration of an emergency situation, pursuant to the *Public Safety Preservation Act 1986*
- Assist with evacuations
- Security operations in evacuated or damaged areas
- In collaboration with QFES undertake arson investigations.

QUEENSLAND RAIL (QR)

- Management of the land within the rail corridor
- Management of rail infrastructure to ensure that it is not impacted by fire e.g. rail bridges, substations, signalling huts, communications equipment
- Maintains bushfire management plans that are reviewed annually and effectively manage:
  - Bushfire risk associated with infrastructure activities
  - Bushfire risk associated with operational rollingstock
  - Bushfire risk associated with heritage rollingstock
  - Bushfire risk associated with bushfire spreading onto QR property from adjoining property.

QUEENSLAND TREASURY

- Administering the *Planning Act 2016* and the Planning Regulation 2017 which sets the planning framework for land use planning and development assessment in Queensland
- Queensland's State Planning Policy July 2017 (SPP) expresses the state's interests in land use planning and development assessment. There are 17 state interests, including, but not limited to, natural hazards, risks and resilience – bushfire.

APPENDIX D
GLOSSARY

TERM	DEFINITION
AS 3959	Australian Standard – Construction of buildings in bushfire-prone areas
AFAC	Australasian Fire and Emergency Services Authorities Council
AFMG	Area Fire Management Group
AIIMS	Australasian Inter-Service Incident Management System
BRMP	Bushfire Risk Mitigation Plan
DAMS	Development Assessment Mapping System
DARMsys	Damage Assessment and Reconstruction Monitoring System
DCDSS	Department of Communities, Disability Services and Seniors
DDMG	District Disaster Management Group
DES	Department of Environment and Science
DMG	Disaster Management Group
DHPW	Department of Housing and Public Works
ESO	Electrical Safety Office
FFDI	Forest Fire Danger Index
FRG	Functional Recovery Group
HQP	HQPlantations
ICC	Incident Control Centre
LSFMG	Locality Specific Fire Management Group
LDMG	Local Disaster Management Group
LDMP	Local Disaster Management Plan
NCC	National Construction Code
NRSC	National Resource Sharing Centre
NSPs	Neighbourhood Safer Places

TERM	DEFINITION
QDC	Queensland Development Code
QDMA	Queensland's Disaster Management Arrangements
QDMC	Queensland Disaster Management Committee
QERMF	Queensland Emergency Risk Management Framework
QFES	Queensland Fire and Emergency Services
QPWS	Queensland Parks and Wildlife Service
QPS	Queensland Police Service
QR	Queensland Rail
QRA	Queensland Reconstruction Authority
QSDMP	Queensland State Disaster Management Plan
QSDR	Queensland Strategy for Disaster Resilience
RCP	Road Corridor Permit
RIDCB	Regional Inter-Departmental Committee Bushfire
ROC	Regional Operations Centre
SCRR	State Controlled Road Reserve
SDCC	State Disaster Coordination Centre
SDCG	State Disaster Coordination Group
SES	State Emergency Service
SEWS	Standard Emergency Warning Signal
SIDCB	State Inter-Departmental Committee Bushfire
SOC	State Operations Centre
SPP	State Planning Policy
SRPPC	State Recovery Policy and Planning Coordinator
DTMR	Department of Transport and Main Roads

APPENDIX E
WEBSITE LINKS

1 https://app.longpaddock.qld.gov.au/dashboard

2 https://www.disaster.qld.gov.au/dmp/Documents/QFES-Heatwave-Risk-Assessement.pdf

3 https://www.health.qld.gov.au/__data/assets/pdf_file/0032/628268/heatwave-response-plan.pdf

4 https://parks.des.qld.gov.au/policies

5 https://www.disaster.qld.gov.au/qermf/Documents/QERMF-Risk-Assessment-Process-Handbook.pdf

6 https://www.disaster.qld.gov.au/cdmp/Documents/Queensland-State-Disaster-Management-Plan.pdf

7 https://dsdmipprd.blob.core.windows.net/general/spp-guidance-natural-hazards-risk-resilience-bushfire.pdf

8 https://www.ruralfire.qld.gov.au/Bushfire_Planning/Documents/Bushfire-Resilient-Communities.pdf

9 https://parks.des.qld.gov.au/managing/planned-burn-guidelines.html#downloads

10 https://www.qld.gov.au/environment/land/management/vegetation/disasters/fire

11 https://www.dnrme.qld.gov.au/land-water/contacts/vegetation

12 https://www.ruralfire.qld.gov.au/Pages/Home.aspx

13 https://www.ruralfire.qld.gov.au/Using_Fire_Outdoors/Documents/Cane-Burning-Notification.pdf

14 https://www.publications.qld.gov.au/dataset/530e9cdd-8240-4d7f-bac9-c7d74df86646/resource/4155330a-7658-4d1d-a09d-8d78a6cffbf5/fs_download/30.07.10combined.pdf

15 https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/fire-management

16 https://www.ruralfire.qld.gov.au/BushFire_Safety/Pages/default.aspx?gclid=EAIaIQobChMI35e39fqg6QIVRB0rCh1tfAz6EAAYASAAEgLYX_D_BwE

17 https://www.disaster.qld.gov.au/dmg/Pages/DM-Guideline.aspx

18 https://www.qra.qld.gov.au/sites/default/files/2019-08/Queensland-Recovery-Plan-update-August2019.PDF

19 http://www.fireandbiodiversity.org.au

20 https://www.powerlink.com.au/electrical-fires

21 https://www.powerlink.com.au/reports/fire-and-high-voltage-transmission-line-safety

22 https://www.powerlink.com.au/reports/activities-easement

23 https://www.powerlink.com.au/reports/burning-sugarcane-near-transmission-lines

24 http://www.fireandbiodiversity.org.au/publications.html

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