SHIRE OF
WILLIAMS

Shire of Williams

Bushfire Risk Management Plan

2025 – 2030

Office of Bushfire Risk Management Bushfire Risk Management (BRM Plan) endorsed XX Month 20XX

Local Government Council BRM Plan approval

XX Month 20XX

Contents

Document control

Document name	Bushfire Risk management Plan	Current version	1.1
Document owner	Shire of Williams	Issue date	DD/MM/YYYY
Document location	Shire Office	Next review date	DD/MM/YYYY

Document endorsements

This Bushfire Risk Management Plan has been endorsed by the Office of Bushfire Risk Management as consistent with the standards detailed in the *Guidelines for Preparing a Bushfire Risk Management Plan 2024*.

The approval of the Bushfire Risk Management Plan by Shire of Williams Council signifies support of the plan's implementation and commitment to working with risk owners to manage bushfire risk. Approval does not signify acceptance of responsibility for risk, treatments or outcomes on land that is not managed by the Shire of Williams.

Local Government	Representative	Signature	Date
Shire of Williams	Britt Logie – LEMC		

Disclaimer

In approving this BRM Plan, the Shire of Williams is acknowledging the assets that have been identified and the risk ratings and treatment priorities assigned. Endorsement of the plan is a commitment by the Shire to work with landowners and managers to address unacceptable risk within the community. Endorsement of this plan is not committing the Shire to a program of treatment works to be implemented by others, or an acceptance of responsibility for risk occurring on land that is not owned or managed by the Shire.

Publication information

1 Introduction

1.1 Background

This Bushfire Risk Management (BRM) Plan provides contextual information to inform a structured approach to identifying, assessing, prioritising, monitoring and treating bushfire risk. The BRM Plan has been prepared by the Shire of Williams, encompasses all land within the Williams Shire and has been written on behalf of all stakeholders within that area. The BRM Plan is informed by consultation and communication with land and asset managers that has occurred throughout its development to ensure an informed and collaborative approach to managing bushfire risk.

The BRM plan has been prepared with due consideration of the requirements stated in the *Guidelines for Preparing a Bushfire Risk Management Plan* (the Guidelines) published by the Office of Bushfire Risk Management (OBRM) including the principles described in *ISO 31000:2018 Risk Management*.

1.2 Objective of the Bushfire Risk Management planning program

The BRM planning program supports local governments to reduce the threat posed by bushfire. The Shire of Williams BRM Plan will contribute to achieving the objective of the BRM program by:

Guiding and coordinating a cross-tenure, multi-stakeholder approach to BRM planning.

Facilitating the effective use of the financial and physical resources available for BRM activities.

Supporting integration between risk owners, strategic objectives and tactical outcomes.

Documenting processes used to monitor and review the implementation of treatments to ensure risk is managed to an acceptable level.

1.3 Legislation, policy and standards

Legislation, policy and standards that were applied in the development of this BRM Plan can be found in the *Bushfire Risk Management Planning Handbook – Appendix 1 – Summary of Related Legislation, Policy and Guidelines*.

2 The Risk Management Process

The BRM planning process is a cycle of understanding the context and assessing and treating risks. Each of these steps is informed by communication and consultation and supported by monitoring and review. The three products produced during the BRM planning process are the BRM Plan, Asset Risk Register and Treatment Schedule.

Further details on the guiding principles and process for the development of this plan can be found in Chapter 2 of the Guidelines.

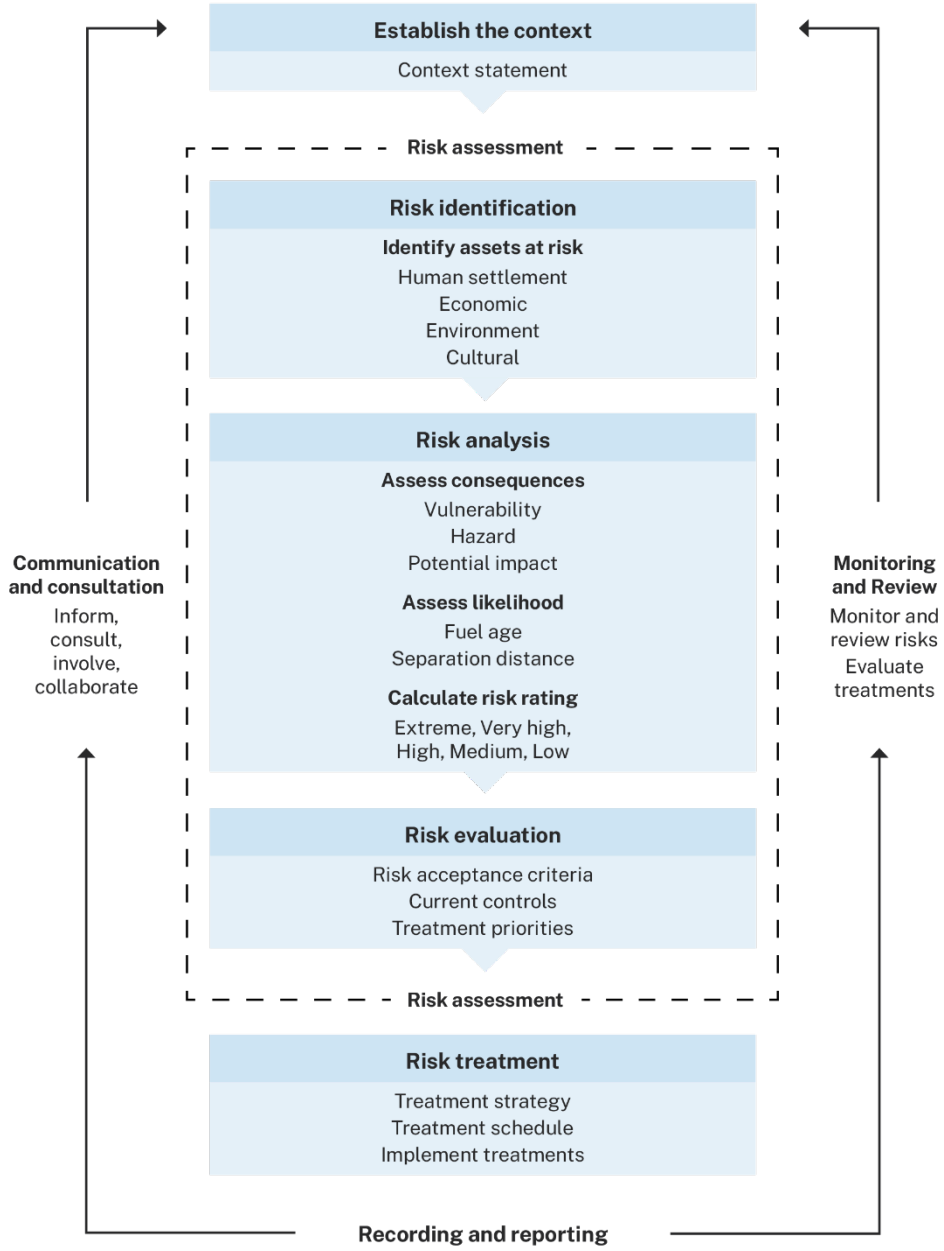


Figure 1. The Bushfire Risk Management Planning Process

2.1 Roles and Responsibilities

The roles and responsibilities of the key stakeholders involved in the development of the BRM Plan are outlined in Table 1.

Table 1 Roles and responsibilities in the Bushfire Risk Management (BRM) planning process

Stakeholders	Roles and Responsibilities
Shire of Williams	Custodian of the BRM Plan. Coordinate the development and ongoing review of the BRM Plan and treatment schedule. Undertake bushfire risk assessment of local government area. Develop and implement a Treatment Schedule for local government managed land. Negotiate a commitment from landowners to treat risks identified in the BRM Plan Manage release of BRM Plan and BRMS data Liaise with stakeholders and landowners to improve awareness of identified risks. Submit the draft BRM Plan to OBRM for review and endorsement
DFES	Contribute to the development and implementation of the BRM Plan. Facilitate involvement of state and federal government agencies in the BRM planning process. Undertake treatments on unmanaged reserves and unallocated Crown land within gazetted town sites. By agreement, implement treatment strategies for other land managers. Endorse BRM Plans as consist with the Guidelines, BRM Program and dynamic risk environment. Administer the Mitigation Activity Fund Grants Program.
Department of Biodiversity, Conservation and Attractions (DBCA)	Contribute to the development of the BRM Plan. Implement their treatment program on DBCA managed land. Provide advice on environmental assets and appropriate treatment strategies for their protection.

Stakeholders	Roles and Responsibilities
Department of Planning, Lands and Heritage	Identify managed assets. Provide advice on management of Aboriginal Cultural Heritage.
Other State and Commonwealth Government agencies and Public Utilities	Identify managed assets. Provide advice on current risk treatment programs. Contribute to the development of BRM Plans. Undertake treatments on lands they manage.
Corporations and Private Landowners	Identify managed assets. Provide advice on current risk treatment programs. Undertake treatments on lands they manage.
Other	Participation in and contribution to the development and implementation of BRM Plans and treatment schedules. Provide advice for the identification of assets that are vulnerable to fire. Providing advice on appropriate treatment strategies for asset protection.

As indicated in the bushfire risk management process, communication and consultation throughout the risk management process is fundamental to the preparation and implementation of an effective BRM Plan. The Shire of Williams ensures appropriate and effective communication occurs with relevant stakeholders throughout the life of this plan, including during the development, implementation and review phases, by following procedures set out in the Shire's community engagement policy.

2.2 Stakeholder Engagement

Engagement with stakeholders during the development, implementation and review of the BRM Plan ensures planning is based on comprehensive information and considers the values and objectives of the entire community.

The following table identifies key stakeholders in the BRM planning process. These are stakeholders that are identified as having a significant role or interest in the planning process or are likely to be significantly impacted by the outcomes.

Table 2 Key stakeholders identified in the BRM planning process for the Shire of Williams

Stakeholder	Role or interest	Level of impact of outcomes	Level of engagement
Shire of Williams	Significant role in plan and treatment development, implementation and review. Responsible for treatments as a landowner/manager	HIGH	Inform, consult, involve, collaborate and empower
LEMC, BFAC & DOAC, CBFCO, CAPTS	Significant role in plan and treatment development, implementation and review.	HIGH	Inform, consult, involve and collaborate
Landowners / Land Managers	Role in plan and treatment development, implementation and review. May have responsibilities for treatments as landowners/managers	HIGH	Inform, consult, involve, collaborate and empower
OBR, DFES District/ Regional Office	Significant role in plan and treatment development, implementation and review. Support role in treatment Implementation.	HIGH	Inform, consult, involve and collaborate
OBRM	Significant role in plan development, implementation and review	MEDIUM	Inform, consult, involve and collaborate
Department of Biodiversity, Conservation and Attractions	Significant role in plan and treatment development, implementation and review. Responsible for treatments as a landowner/manager	HIGH	Inform, consult, involve, collaborate and empower
Main Roads WA	Role in plan and treatment development, implementation and review. Responsible for treatments as a landowner/manager critical infrastructure interest.	MEDIUM	Inform, consult, involve, collaborate and empower
Other Government Agencies (Telstra, Water Corporation, Western Power)	Role in plan and treatment development, implementation and review. Responsible for treatments as a landowner/manager critical infrastructure interest.	MEDIUM	Inform, consult, involve, collaborate and empower

Department of Lands Development WA and Landgate	Role in plan and treatment development, implementation and review	Medium	Inform, consult, involve, collaborate and empower
Chief Bushfire Control Officer	Significant role in plan and treatment development, implementation and review	High	Inform, consult, involve, collaborate and empower
Bushfire Brigades and other Emergency Services Volunteers	Significant role in plan and treatment development, implementation and review	High	Inform, consult, involve, collaborate
Traditional Owners, Regional Corporation, Department of Aboriginal Affairs	Role in plan and treatment development, implementation and review	Medium	Inform, consult and involve

Communication and Consultation

Communication and consultation are fundamental to the development, implementation and review of the BRM Plan.

3 Establishing the Context

3.1 Strategic and Corporate Framework

The Shire of Williams is committed to community safety, risk management and effective management of the environment and natural resources. This is reflected in the Shire's vision:

Williams is an independent, growing and vibrant community, achieved by maintaining a balanced and caring approach to its people, economy and environment.

When establishing the context of the Bushfire Risk Management Plan (BRMP) for the Shire of Williams**,** It is important to align the BRMP with the Shire's existing strategic and corporate planning framework**.** This ensures that bushfire risk management becomes a core part of the Shire's long-term vision, operational priorities, and decision-making processes.

Strategic Alignment

The Shire of Williams' Bushfire Risk Management Plan (BRMP) supports the vision and objectives outlined in the Strategic Community Plan 2022–2032. It aligns with community priorities such as ensuring safety, protecting environmental and built assets, and fostering sustainable land use. The BRMP reflects the Shire's commitment to resilience, responsible land management, and proactive planning.

Operational Integration

Bushfire risk mitigation activities identified in the BRMP will be integrated into the Shire's Corporate Business Plan. This ensures that actions are adequately resourced, prioritised, and embedded within the Shire's day-to-day service delivery. The BRMP also supports compliance with the Emergency Management Act 2005 and the WA Bushfire Risk Management Framework.

Financial Context

The Long Term Financial Plan (LTFP) 2024–2039 provides the strategic funding framework for implementing mitigation treatments outlined in the BRMP. It enables forward planning of bushfire-related infrastructure upgrades, fuel reduction programs, and community education initiatives. The Shire includes annual budget allocations for responding to Bushfires and also seeks external grants to support delivery of cost-effective treatments where applicable.

Emergency Preparedness

The BRMP complements the Shire's Local Emergency Management Arrangements (LEMA), ensuring consistency in planning for response, recovery, and preparedness. It defines responsibilities for local government, DFES, DBCA, and private landholders, and promotes collaborative efforts to manage bushfire risks across the region.

The Shire of Williams is committed to engaging with the community and stakeholders on matters related to bushfire related risk management and maintaining compliance with bushfire legislation.

The size of the Shire's structure, and available funding, at this time does not support a role specifically allocated to Emergency Management. It has therefore been determined that the responsibility for Emergency Management will sit with the CEO and Community Development Officer with tasks delegated as appropriate.

The functions/positions critical to the success of the Williams Bushfire Risk Management Plan are outlined below:

Shire Leadership Team	• Oversight of the implementation, monitoring and review of the Bushfire Risk Management Plan • Sourcing and approving funding and expenditure • Monitoring the implementation of agreed treatments • Liaison with key stakeholders • Participation on Local Emergency Management Committee (LEMC) • Management of the release of BRMS Plan and BRMS data
Person/s Tasked with Emergency Management within the Shire Administration Team	• Develop practices for fire management on LG, UCL and UMR land • In consultation, plan annual schedule of works • Build knowledge and understanding of fire management practices within the community • Participate on Bushfire Advisory Committee (BFAC) • Support bushfire meetings and committees • Oversee burning programs and support from local brigades • Contribute to treatment planning • Negotiate with stakeholders
Chief Bushfire Control Officer	• Oversee burning programs and support from local brigades • Contribute to treatment planning • Negotiate with stakeholders • Conduct Fire breaks inspection and enforcement
Works Department	• Contribute to treatment planning • Undertake planned works

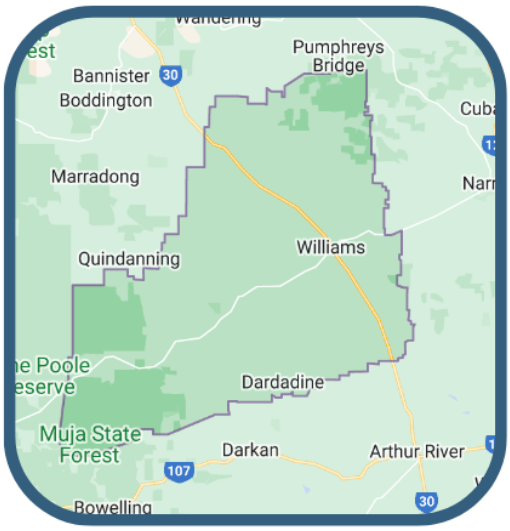
NOTE: Some functions outlined above may be fulfilled through the employment of contact personnel

The Shire of Williams recognises the importance of leadership and coordination in emergency management and has an established Local Emergency Management Committee (LEMC) with multi agency membership. This committee provides an important multi-agency forum to enable consultation around this BRM Plan.

3.2 Location

The Shire of Williams is located in the Wheatbelt region of Western Australia, approximately 160 kilometres southeast of Perth, the state capital. It is situated along the Albany Highway, a major transport route connecting Perth to the south coast city of Albany. Williams is a small rural community with a total population of 1040 and an estimated 400 living in the townsite. The Shire covers 2,295 km² and includes the localities of Quindanning, Tarwonga, Dardadine, Boraning, Culbin, Narrakine and Congelin

The Shire of Williams features a mix of agricultural land, rural residential areas, natural bushland, and community infrastructure. The Williams River runs through the area, contributing to the local landscape and ecosystem. The strategic location makes Williams a natural stopover point for travelers between Perth and the Great Southern Region, with tourism, farming and local services playing key roles in its economy



Key Geographic Details:

Region: Wheatbelt, Western Australia

Coordinates: Approximately 33.0° S, 116.9° E

Proximity to Major Centres:

160 km from **Perth**

32 km from **Narrogin**

230 km from **Albany**

Boundaries and Surrounding Areas:

The Shire shares boundaries with several neighbouring local government areas:

North: Shire of Wandering

East: Shire of Cuballing and Shire of Narrogin

South: Shire of Wagin and Shire of Woodanilling

West: Shire of Boddington

The economy is largely driven by the agricultural industry, tourism and agri-business related developments. Recent years have seen a greater diversification of the economy into increasing tourism related businesses and service industries. These exist alongside the more traditional businesses that support the agricultural endeavors of the region that includes cropping, livestock, hay processing and grain pellet production.

3.3 Land Use and Tenure

Developing a Bushfire Risk Management Plan (BRMP) for the Shire of Williams involves a comprehensive understanding of land use and tenure within the region. This information is crucial for identifying assets at risk, assessing bushfire hazards, and implementing effective mitigation strategies.

The Shire of Williams encompasses a variety of land uses, each presenting unique considerations for bushfire risk management:

Agricultural Land: Predominantly used for cropping and livestock grazing, agricultural areas can accumulate combustible materials, increasing fire risk.

Residential Areas: Towns and settlements with housing and community infrastructure require tailored protection measures to safeguard inhabitants and property.

Commercial and Industrial Zones: Facilities such as grain storage sites and workshops may house flammable materials, necessitating specific fire prevention strategies.

Natural Vegetation and Conservation Areas: Regions like the Williams Nature Reserve contain dense vegetation, which can serve as fuel for bushfires if not properly managed.

Infrastructure Corridors: Roads, power lines, and communication networks traverse various land types and must be maintained to prevent them from becoming ignition sources or fire pathways.

Understanding land ownership is essential for coordinating bushfire risk management efforts:

Private Freehold Land: Owned by individuals or entities, these lands require engagement with owners for implementing fire mitigation measures.

Crown Land: Managed by state agencies, including conservation parks and reserves, where government departments are responsible for fire management practices.

Local Government Land: Areas under the jurisdiction of the Shire, such as public parks and community facilities, where the local council implements fire prevention and response strategies.

Unallocated Crown Land (UCL): Land not assigned to any specific agency or purpose, often requiring coordinated management approaches among various stakeholders

The BRM Plan acknowledges challenges arising from the significant portions of the Shire managed by private landowners. These challenges necessitate strategic considerations:

Reduced Local Population for Fire Prevention:
The prevalence of privately managed land contributes to a diminished local population, impacting manpower for fire prevention and firefighting efforts.

Engagement of Private Landowners as Stakeholders:
Given the high percentage of privately owned land, proactive engagement with private landowners as key stakeholders is crucial. Education and consultation play pivotal roles in aligning their efforts with the BRM Plan and mitigation strategies.

Risk Amplification from Non-Compliance:
Non-compliance with Council policies by one landholder poses an increased risk to neighboring landowners, emphasising the need for consistent adherence to regulations.

Economic and Social Implications of Farm Loss:
The potential loss of one farm, considering predominantly private land management, carries significant economic and social implications for the Shire, necessitating a comprehensive risk assessment.

Balancing Mitigation Impact and Productivity:
Balancing the impacts of mitigation and risk reduction must be carefully considered in the broader context of productivity and associated costs. Striking this balance is essential for sustainable and effective bushfire management practices within the Shire.

To address the bushfire risk posed by hazardous fuels on private land, the enforcement of the Firebreak Order in accordance with the Bush Fires Act remains a traditional yet effective strategy.

3.3.1 Integrating Land Use and Tenure into Bushfire Risk Management

Effective bushfire risk management in the Shire of Williams involves:

Asset Identification: Cataloguing assets based on land use and tenure to assess their vulnerability to bushfires.

Risk Assessment: Evaluating the likelihood and potential impact of bushfires on different land types and ownerships.

Stakeholder Engagement: Collaborating with landowners, government agencies, and the community to develop and implement fire mitigation strategies.

Mitigation Planning: Designing and executing tailored fire prevention and response plans that consider the specific characteristics of each land use and tenure type.

The Shire of Williams encompasses approximately 2,306 km² in the Wheatbelt region of Western Australia. Land within the Shire is managed by various entities, each responsible for specific land tenures and uses. While exact percentages may vary and are subject to change, the following table provides a general overview of land management responsibilities within the Shire:

Land Manager	Local Government Area (%)
Local Government *Oversees local roads, public reserves and community facilities*	0.96%
Private *Privately owned land, primarily used for agriculture (cropping and grazing)*	74.81%
Department of Biodiversity, Conservation and Attractions (DBCA) *Manages conservation reserves and national parks.*	20.12%
Department of Fire and Emergency Services (DFES) *Manages land from a risk reduction and fire safety perspective.*	0.03%
Department of Planning, Lands and Heritage (DPLH) *Manages unallocated reserves and national parks.*	1.66%
Department of Water and Environmental Regulation (DWER) *Manages land related to water protection and environmental conservation*	2.03%
Main Roads Western Australia *Responsible for major highways and associated infrastructure*	0.25%
Other State Government Agencies *Includes various departments managing specific parcels of land*	0.14%

Source: Office of Bushfire Risk Management, 2025

3.4 Community Demographics and Values

The Shire of Williams, situated in Western Australia's Wheatbelt region, is a close-knit rural community with a population of approximately 1,040 residents. The community places a strong emphasis on values such as safety, environmental stewardship, and mutual support, all of which are integral to its approach to bushfire risk management.

The Shire's Strategic Community Plan highlights several core values that influence its bushfire risk management strategies:

Community Connectedness and Lifestyle: A strong sense of community encourages collective action in fire prevention and response.

Support for All Ages: Emphasis on caring for both the young and elderly ensures that vulnerable populations are considered in emergency planning.

Safety: A commitment to safety underpins initiatives such as fire control orders and community education on bushfire preparedness.

Environmental: Recognition of the need to care for the environment aligns with sustainable land management practices that mitigate bushfire risks.

The demographic profile and community values of the Shire of Williams have several implications for bushfire risk management:

Community Engagement: Strong social networks facilitate effective dissemination of information and mobilization during bushfire events.

Inclusive Planning: Policies must account for the needs of all age groups, ensuring that emergency services are accessible to the entire population.

Preventative Measures**:** Environmental values support proactive land management strategies, such as controlled burns and vegetation management, to reduce fuel loads.

Education and Awareness**:** Ongoing community education initiatives are essential to maintain high levels of preparedness and resilience.

By aligning bushfire risk management strategies with the Shire's demographic characteristics and community values, the Shire of Williams can enhance its resilience to bushfire threats.

	2016	2021
MALE	**534 (53.30%)**	**534 (51.20%)**
FEMALE	**468 (46.7%)**	**509 (48.80%)**
TOTAL	**1001**	**1040**
Source: Australian Bureau of Statistics		

Farming and Labour (Backpackers)

The Shire of Williams has witnessed a significant shift in its agricultural landscape over time, marked by the trend of farm consolidation or amalgamation. This strategic move, driven by the pursuit of economies of scale, involves farmers acquiring or merging neighboring properties to create larger, more efficient farms. While farm consolidation presents economic advantages by spreading fixed costs across a broader area, it also introduces unique challenges to the local labor force.

The consequence of farm consolidation is a reduction in available local labor resources, leading to the outsourcing of labor for seasonal agricultural work. Backpackers, forming a significant part of this outsourced labor, contribute valuable services to the agricultural sector.

Various factors contribute to the increased bushfire risk associated with backpackers in agricultural settings. These include their limited farming experience, unfamiliarity with fire safety protocols, and ignorance of environmental factors that elevate the bushfire risk, language and communication challenges, inadequate training and supervision, and the short-term nature of their employment. Employers, at times, may fall short in providing adequate training and supervision due to the temporary and transient nature of backpacker employment.

As a result, the responsibility often falls on the Shire of Williams and the Chief Bushfire Control Officer to assume a crucial role in providing necessary resources and training for backpackers. This includes managing bushfire brigade memberships, supplying uniforms, and delivering the required training. Effectively addressing the challenges posed by backpacker employment in the agricultural sector requires ongoing management and collaboration between local authorities, employers, and the transient workforce.

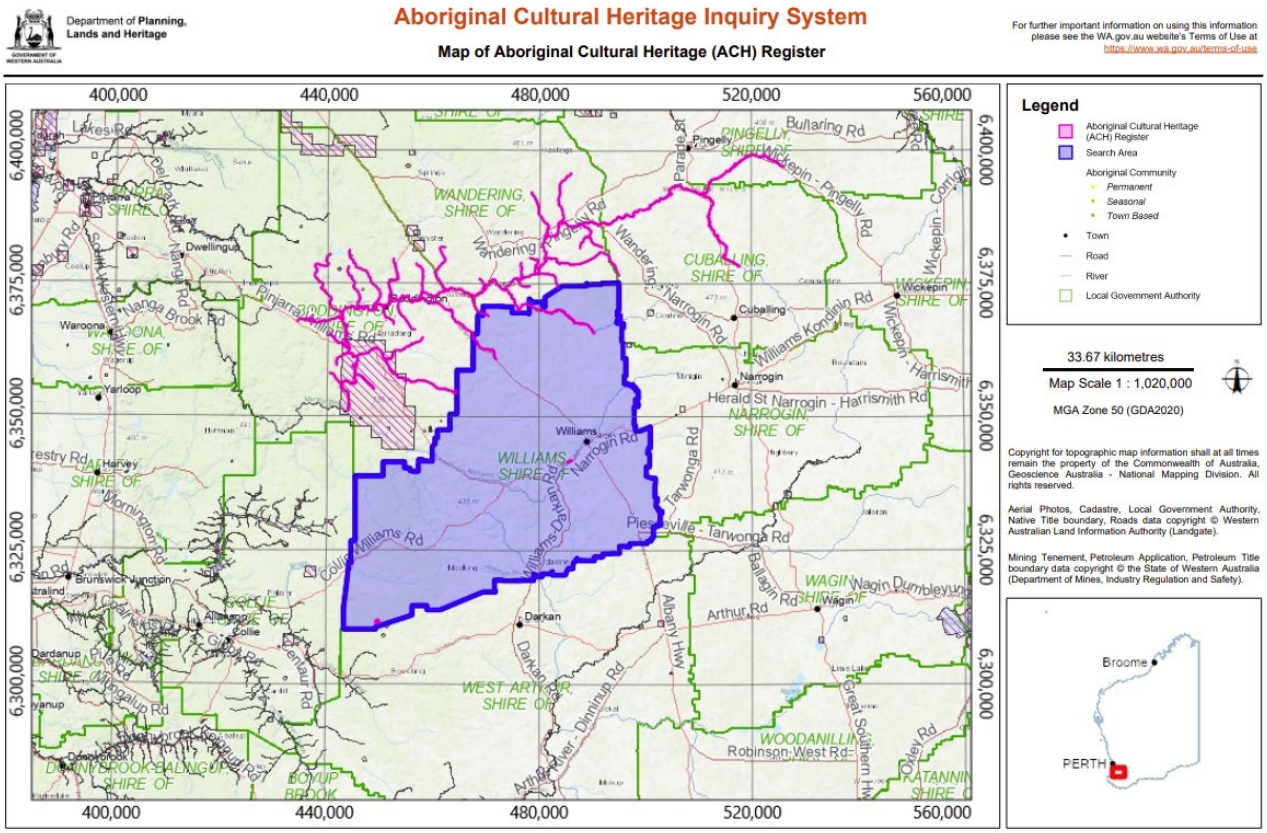
Proposed Future Renewable Developments

The state drive for renewable energy is expected to result in the emergence of wind farms in the Williams and surrounding districts. It is not yet clear how wind farm owners / operators will engage with fire mitigation efforts.

3.5 Cultural Heritage

The cultural heritage of the Shire of Williams plays a meaningful role in shaping how the community understands and responds to bushfire risk. It influences both the physical protection of culturally significant sites and the community's approach to land management, emergency planning, and recovery.

Registered Aboriginal Cultural Heritage sites and Protected Areas are shown in the Aboriginal Cultural Heritage Inquiry System (ACHIS). This system will be consulted and appropriate approvals obtained when planning bushfire mitigation activities.



The traditional owners of the Shire of Williams are the Wiilman people, a subgroup of the Noongar Nation, who have inhabited the south-west region of Western Australia for tens of thousands of years. The Wiilman people's ancestral lands encompass areas including Williams, Collie, Boddington, Narrogin, and Katanning.

The Aboriginal Cultural Heritage Inquiry System identifies 3 registered sites within the Shire of Williams.

- *Hotham River – State Register Site 27935*
- *Axle Grease Reserve – State Register Site 500*
- *Batalling Lizard Trap – State Register Site 4573*

Where Indigenous Heritage Sites have been identified a bushfire risk assessment has been undertaken and these have been mapped and recorded on BRMS.

3.6 Economic Activities and Industry

The economic activities and industries in the Shire of Williams are closely tied to the region's land and natural resources, making them both vulnerable to bushfire impacts and critical stakeholders in fire management.

Industry Sector	Bushfire Vulnerabilities	Strategic Response
Agriculture	Livestock loss, Infrastructure damage, grassfires	Firebreak compliance, farmer engagement, equipment access
Transport	Road closures, infrastructure damage	Vegetation control, detour planning, resilient infrastructure
Tourism	Visitor safety, natural area damage	Education, alert system, land management
Local Government	Asset loss, Disruption to services, recovery demands	Emergency planning, community support, resilience funding

The short-term and long-term impacts on the above industry sectors will vary in scope and severity. These impacts range from immediate operational disruption to extended recovery times, economic loss**,** and changes in land use or investment decisions**.** These impacts are summarised below:

Industry Sector	Short-Term Effects	Long-Term Effects
Agriculture	Loss of livestock, fencing, and feed. Equipment and infrastructure damage Crop loss and soil degradation Disruption during harvest periods	Reduced productivity due to soil erosion and damage to pasture. Increased costs of insurance and recovery. Long-term stress on farmers, affecting workforce health. Investment in fire-resilient infrastructure and changes in farm practices.
Transport & Logistics	Road closures on Albany Highway and local routes Delays in freight movement (grain, livestock…) Damage to road infrastructure and signage	Need for upgrades to roads to make them more fire-resilient Loss of transport reliability can affect business viability Re-routing or changes in logistics patterns Increased maintenance and vegetation costs.

Tourism & Hospitality	Visitor cancellations and reduced bookings. Damage to natural attractions and scenic areas Safety concerns deterring travel Closures of businesses during alerts or evacuations	Reputational damage and reduced visitor numbers Extended recovery for natural areas (e.g., wildflowers, reserves) Reduced confidence in the region for tourism investment
Local Government	Damage to Shire buildings, parks, halls, and infrastructure Emergency response coordination responsibilities Disruption to normal services (waste, maintenance, recreation)	Pressure on budgets due to recovery costs Increased need for community support and mental health services Greater focus on emergency planning and fire mitigation in policy Potential infrastructure upgrades or redesigns to build resilience

3.7 Topography and Landscape Features

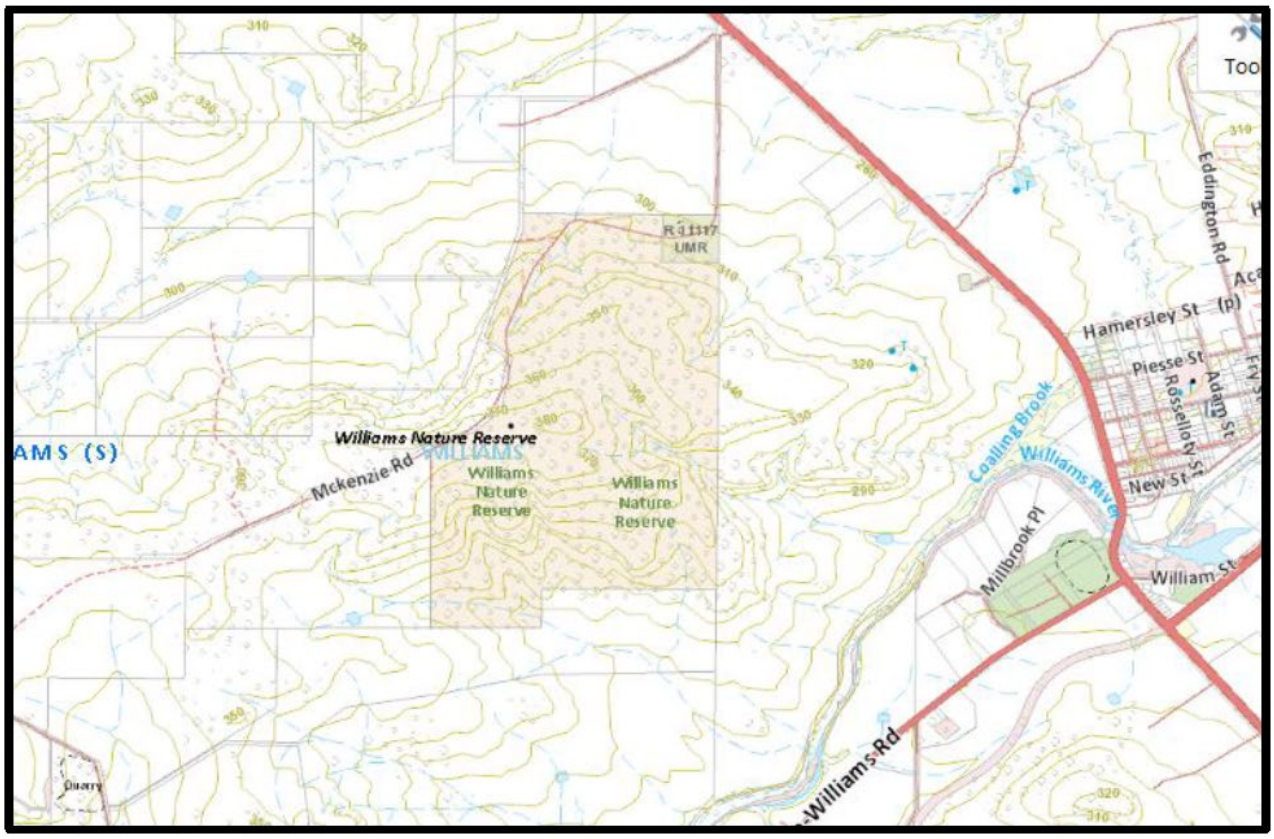
The geographic characteristics of the Shire of Williams significantly influence its bushfire risk profile. These factors include topography, vegetation types, climate, land use patterns, and regional connectivity, all of which shape the likelihood, intensity, and impact of bushfire events. The landscape of the Shire of Williams can be described as gently undulating and of low relief, except where occasional granite outcrops protrude as rock domes. Elevation decreases from west to east from 140 to 70 metres. The principal summits in the shire are Mt Hillman, Tarwonga Hill (371m) and Wanerie Katta (377m).

Topography and Landscape

Topography contributes to bushfire risk by influencing fire rate of spread (ROS) - and therefore intensity - impeding access for suppression resources and limiting options for fuel reduction. The influence topography has on bushfire risk is considered in relation to its effect on response access, and as a variable in predicting the potential fire behaviour assets may be exposed to, including the likelihood of significant ember attack. The Shire features undulating rural landscapes with gentle slopes, valleys, and breakaway formations. Elevated areas and ridgelines can accelerate fire spread due to rising heat and wind funneling. Sloped terrain increases the rate of fire movement uphill, reducing suppression effectiveness.

The Shire of Williams has certain areas that are particularly vulnerable to bushfire risks due to their topography and landscape characteristics. These areas are crucial for targeted mitigation efforts. These areas include but are not limited to:

- Areas to the North and West of the Williams townsite, such as Congelin and Boraning, feature undulating landscapes with ridgelines and valleys.
- Slopes exceeding 10 degrees which will significantly increase bushfire intensity and spread.
- Valleys can channel wind and fire, complicating evacuation routes.
- The below table shows the contour relief of the Williams Nature Reserve which has a summit of 377m



Vegetation and Fuel Loads

The region includes a mix of native bushland, agricultural land, and roadside vegetation. Native vegetation (e.g., eucalypt woodlands, shrublands) presents high fuel loads, especially during dry summer months. Road verges and creek lines act as corridors for fire spread if not well maintained.

Risk Impact: Dense vegetation near settlements and farms increases ignition potential and fire intensity. Seasonal dryness significantly increases the risk in late spring through summer.

Climate and Weather Conditions

Williams has a Mediterranean climate with hot, dry summers and cool, wet winters. High temperatures, low humidity, and strong winds in summer create ideal fire conditions. Lightning storms in transitional seasons (spring/autumn) can ignite remote fires.

Risk Impact: Climatic patterns contribute to extended fire seasons, increasing the demand for year-round mitigation and response preparedness.

Land Use and Human Activity

The Shire is primarily agricultural, with extensive cropping and livestock grazing. Machinery use, burn-offs, and harvesting can cause accidental ignitions during the fire season. Low-density population means longer response times for remote areas.

Risk Impact: Human activity increases ignition risk, especially during restricted burn periods. Farming areas also create fragmented fuel zones, influencing fire behavior unpredictably.

Access, Infrastructure, and Connectivity

The Shire of Williams reliance on well-developed transportation networks, particularly the Albany Highway, Narrogin Road and Pinjarra-Williams Road, is crucial for emergency services, commercial transportation, and tourism-related activities. The potential destruction or disruption of these critical transportation arteries could have cascading effects, including isolation, hindered emergency response, and economic disruptions that extend beyond the immediate aftermath of a bushfire.

The Shire has 14 bridges located around the region, 8 being the responsibility of Main Roads and the remaining 6 Shire managed. The majority of these are timber construction and have therefore been identified by the Shire as a significant risk given the potential to impact transport routes, disrupting both local and regional traffic, should the bridges be impacted by fire or other hazards. Traffic routes within the Shire are critical to tourism as well as the movement of agricultural produce and therefore the local and regional economy can be adversely affected by such disruptions

In response to some of these challenges, the Shire has implemented measures outlined in the fire break notice, emphasising both prevention and rapid response strategies. The requirement for fire units during harvesting activities and bans on harvest and vehicle movements during high-risk weather conditions, demonstrating a proactive stance toward managing bushfire risks associated with economic activities.

Ultimately, the Shire of Williams recognises the need for a multifaceted and collaborative approach to bushfire risk management, considering the economic, environmental, and social dimensions. The Bushfire Risk Management Plan serves as a crucial guide in aligning economic activities with broader risk mitigation strategies, fostering resilience, shared accountability, and the safety and well-being of the Shire's residents.

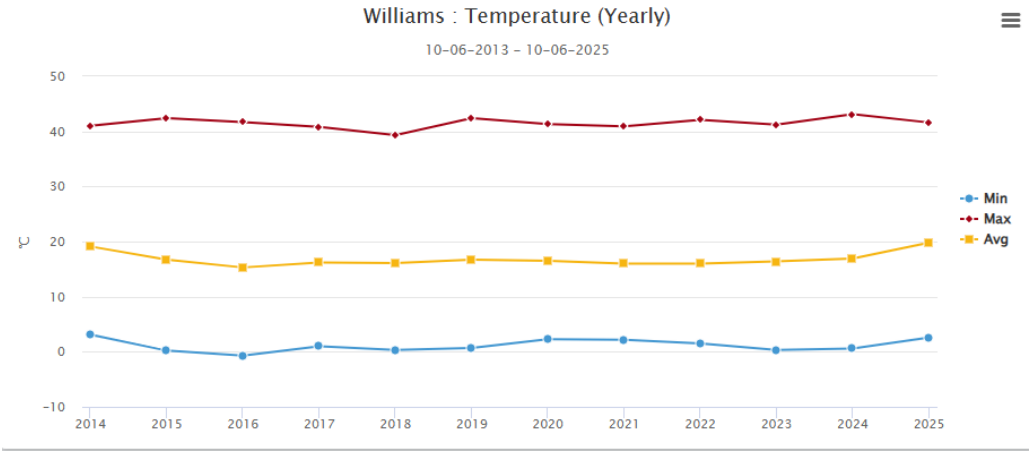
Risk Impact: Limited access to firefighting resources and evacuation routes can delay response and endanger life and property during fast-moving fires

3.8 Climate and Weather

The Shire of Williams, located in the Wheatbelt region of Western Australia, is approximately 160 km southeast of Perth. The landscape features rolling agricultural plains, river systems such as the Williams River, and scattered areas of remnant native vegetation. The Shire is subject to a Mediterranean climate that plays a significant role in influencing bushfire behaviour and risk. It is characterised by hot, dry summers and cool, wet winters. These climatic conditions, combined with seasonal weather patterns, significantly influence the region's bushfire risk profile.

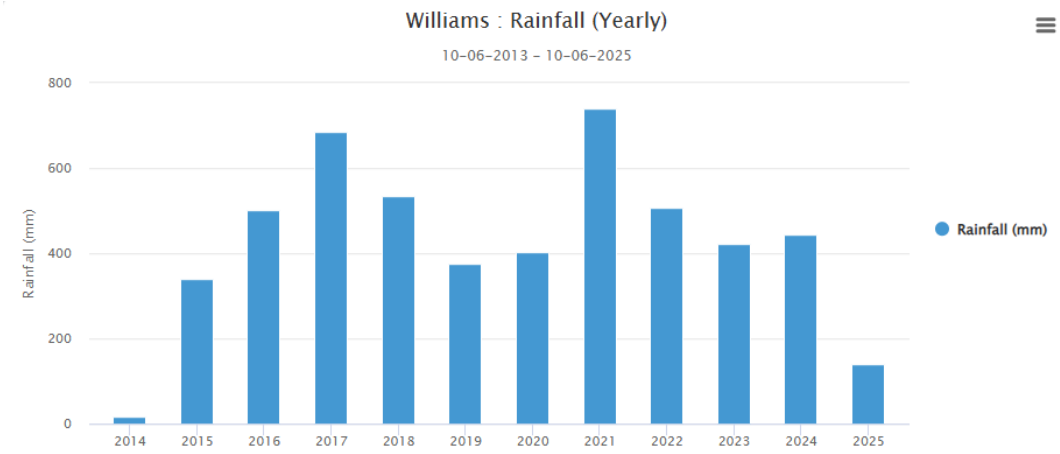
Temperature

The Shire experiences prolonged periods of high temperatures during summer, often exceeding 35°C. These conditions dry out vegetation, creating ideal fuel conditions for bushfires.



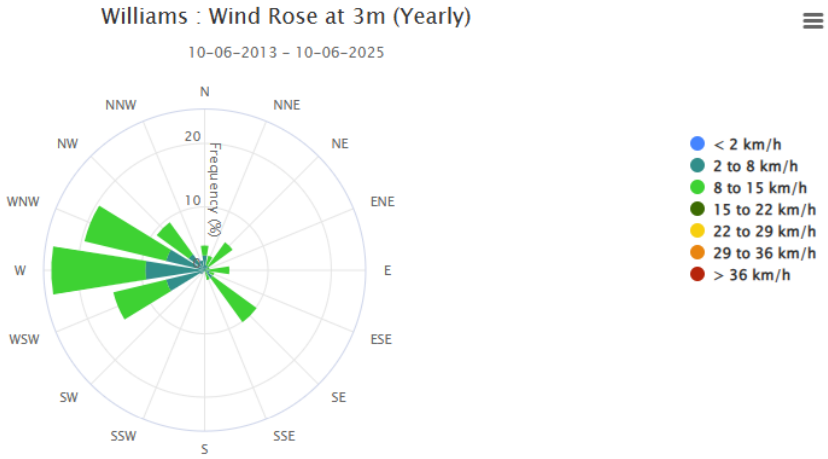
Seasonal Rainfall Variation

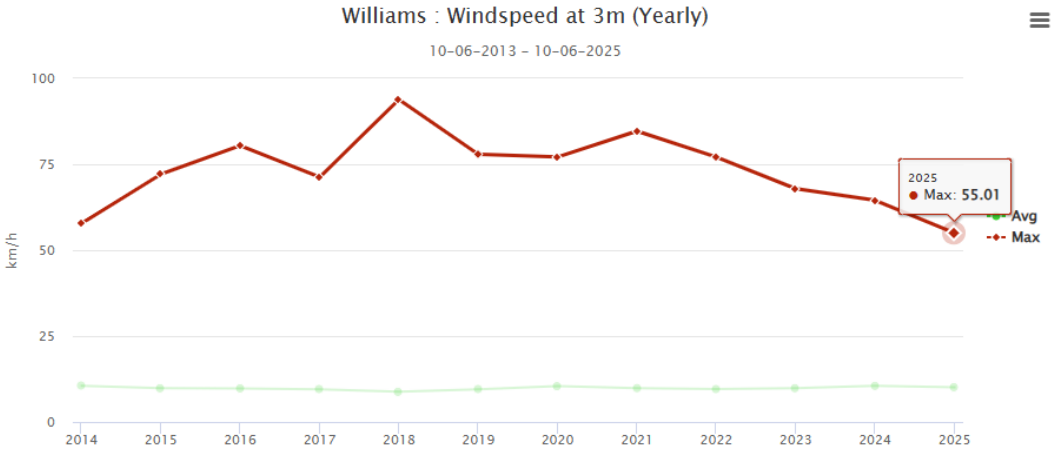
Winter rainfall promotes vegetation growth, particularly grasses and crops. However, the subsequent dry season causes this vegetation to dry and become highly flammable fuel. Annual rainfall variability (450–550 mm) contributes to unpredictable fuel loads.



Wind

Strong easterly and northerly winds during fire season (typically November to April) exacerbate fire behaviour by accelerating fire spread and causing spot fires. Sudden wind changes can also complicate suppression efforts.





Lightning and Dry Thunderstorms

Dry lightning strikes are a key natural ignition source, particularly in rural and bushland areas of the Shire. These storms occur with little to no rainfall and often ignite fires in remote locations.

Fuel Load Dynamics

Seasonal cropping, pasture residues, and unmanaged roadside or reserve vegetation significantly contribute to the regional fuel load. Without adequate fuel management, these areas pose a high bushfire risk.

The fire season in the Shire typically runs from October to April. During this period, hot and dry weather, combined with strong winds and low humidity, significantly elevates fire danger levels. The landscape is highly susceptible to ignition due to accumulated dry fuel loads, particularly after poor rainfall seasons.
Key fire weather factors include:

- - Prolonged heatwaves during summer
- - North-westerly winds that drive rapid fire spread
- - Dry thunderstorms capable of producing lightning without rainfall
- - El Niño climate patterns increasing bushfire-prone conditions

The Shire's climate necessitates proactive bushfire risk management. The combination of low rainfall, high summer temperatures, and volatile wind conditions contributes to a higher number of fire-prone days. This climate trend, coupled with increasing drought frequency, calls for robust mitigation strategies including fuel load management, community education, and improved emergency response capabilities.
Implications include:

- - Increased number of Severe or higher Fire Danger Rating days
- - Early onset and later end to the fire season
- - Vegetation stress increases fuel availability

Understanding the local climate and weather influences is essential for effective bushfire risk management. Planning and mitigation strategies incorporate:

- *Seasonal fuel load monitoring*
- *Prescribed burning programs*
- *Community education during peak periods*
- *Weather-based fire bans and operational readiness*

3.9 Vegetation and Fuel

The Shire of Williams lies within the **Wheatbelt region** of Western Australia and features a mix of native vegetation, agricultural land, and remnant bushland. These land types create a varied fuel landscape that significantly contributes to bushfire hazards across the Shire.

Remnant Native Vegetation

- Eucalypt Woodland and Forest
  - *Dominated by species such as wandoo (Eucalyptus wandoo), jarrah (E. marginata) and marri (Corymbia calophylla).*
  - *These trees produce large quantities of flammable leaf litter, bark, and twigs, which accumulate on the ground.*
  - *Stringy bark and oil-rich leaves increase ignition potential and support intense fires.*
- Understorey Shrubland
  - *Includes acacia, grevillea, and other fire-prone species.*
  - *Provides fine and medium fuels, which ignite easily and carry fire through the mid-level strata of vegetation.*

Grassland and Pastures

- Improved Pastures and Grass Crops
  - *Commonly used for livestock grazing and cropping.*
  - *Dry grasses in summer and early autumn act as fast-spreading, fine fuels.*
  - *Stubble from cereal crops (wheat, barley) after harvest significantly increases fire risk.*
- Roadside Vegetation and Fence Lines
  - *Often unmanaged strips of native or weedy vegetation.*
  - *Can act as fire corridors if not regularly slashed or burnt.*

Plantation and Reforestation Areas

While less common, any private or commercial plantations (e.g., blue gum or pine) can act as intense fuel sources due to dense foliage and litter build-up.

Fire can spread quickly through closely spaced, uniform stands of vegetation with continuous fuel structure.

Invasive and Weedy Species

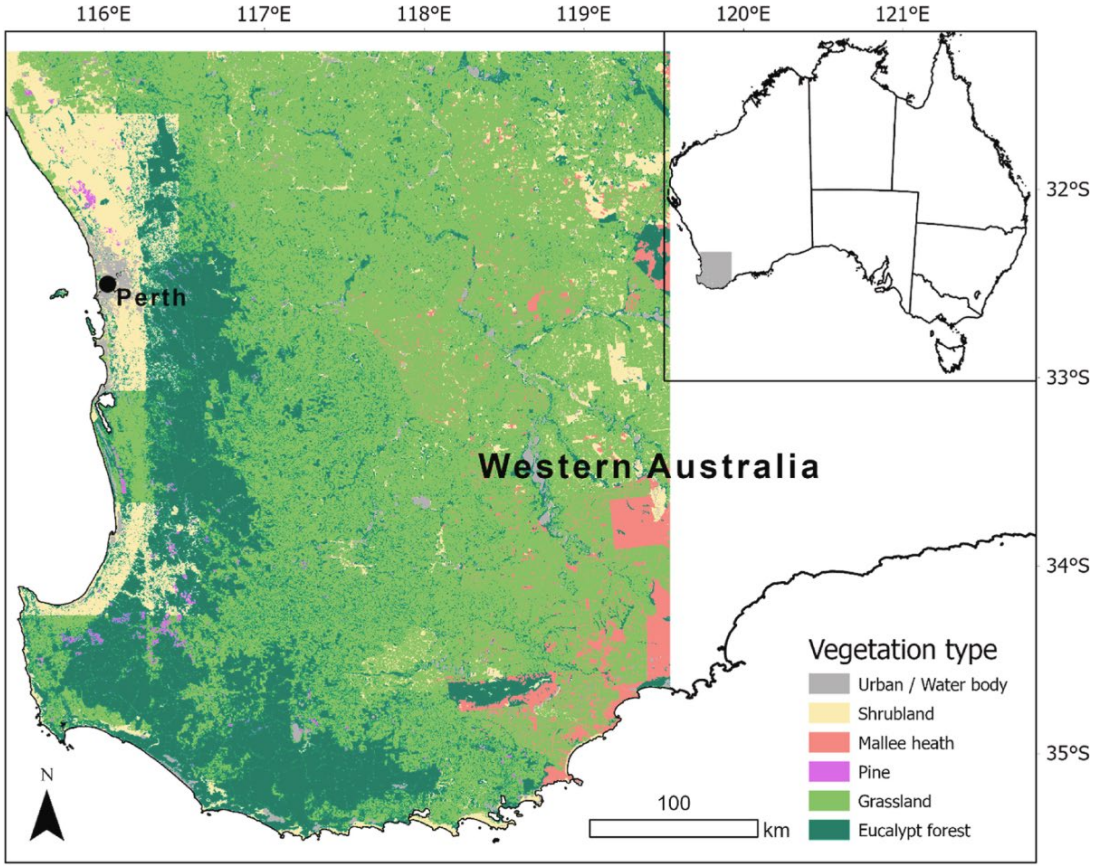
Species like wild oats, capeweed, and annual grasses increase fine fuel loads, particularly in disturbed or cleared areas.

Weedy regrowth in cleared paddocks can dry out rapidly and act as a flash fuel.

Built-up Areas and Urban Fringe

Properties on the rural-urban interface often have a mix of garden vegetation, dry grass, woodpiles, and unmanaged paddocks.

These areas are especially vulnerable when vegetation is not properly maintained, increasing the chance of house and asset loss during bushfire events.



Map of different vegetation types

3.10 Fuel Load Risks

Fuel load risks in the Shire of Williams are a critical factor in bushfire behaviour, intensity, and suppression difficulty. Given the Shire's climate, vegetation types, and load uses, managing fuel loads is essential to reducing bushfire risk.

High fuel loads in native reserves, creek lines, and roadside vegetation increase the intensity and difficulty of fire suppression. These locations are often close to townsites, infrastructure or farmland, increasing asset exposure.

Contributing factors to high fuels loads are:

- Reduced grazing pasture in some areas
- Delays in prescribed burning due to weather or resourcing
- Infrequent inspections on private rural lots or absentee landowners.

3.11 Important Species and Communities

Flora and Fauna represent particular significance for the Shire of Williams as they are not only recognised environmental assets in their own right but also impact the treatment options available for identified risks in relation to other assets. Based upon data from the Department of Biodiversity, Conservation and Attractions 'Nature Map', thirty-nine (39) species of threatened and priority fauna have been recorded or sighted throughout the Shire of Williams. These plants are listed below:

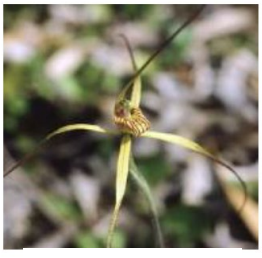
RARE OR LIKELY TO BECOME EXTINCT	PRIORITY 1	PRIORITY 2	PRIORITY 3	PRIORITY 4
• Quindanning Spider Orchid (Caladenia hopperiana) • Diuris micrantha • Narrogin Pea (Pultenaea pauciflora)	• Caladenia caesarea subsp. transiens • Tetratheca applanata • Thomasia dielsii • Xanthoparmelia fu migata	• Andersonia bifida • Banksia acanthopoda • Chamelaucium sp. Dryandra (D. Rose 446) • Grevillea crowleyae • Leucopogon darlingensis subsp. rectus • Logania sylvicola • Marianthus dryan dra	• Acacia deflexa • Amanita carneiphylla • Amanita fibrillopes • Kalamunda Lepidella (Amanita kalamundae) () • Anigozanthos bicolor subsp. exstans • Durell's Anthotium (Anthotium odontophyllum) () • Bossiaea concinna • Hutt River Poison (Gastrolobium propinquum) () • Goodenia katabudjar • Fan Triggerplant (Stylidium rhipidium) () • Synaphea brachyceras • Verticordia huegelii va r. tridens	• Acacia cuneifolia • Banksia cynaroides • Blue Boronia (Boronia tenuis) () • Darwinia thymoides subsp. St Ronans (J.J. Alford & G.J. Keighery 64) • Western False Pipistrelle (Falsistrellus mackenziei) • Runner Poison (Gastrolobium ovalifolium) () • Gastrolobium stipulare • Woolly Poison (Gastrolobium tomentosum) () • Hibbertia montana • Helena Velvet Bush (Lasiopetalum bracteatum) () • Lasiopetalum car diophyllum

Caladenia hooperiana (Quindanning Spider Orchid)

Tetratheca applanata

Thomasia dielsii

Pultenaea pauciflora (Narrogin Pea)



Caladenia caesarea subsp. transiens

All treatments need to be assessed in line with the requirements of the identified flora and fauna with care given to ensure appropriate authorities are consulted prior to any mitigation work commencing. Where possible, consultation will occur prior to implementing any response strategies. The Shire will, where possible, remind landowners/managers of their obligation to obtain appropriate clearances and approvals prior to commencing vegetation based treatments.

The Wildlife Conservation Act 1950 provides for native fauna (and flora) to be protected where they are under an identifiable threat of extinction and, as such, are considered to be "threatened". Based upon data from the Department of Biodiversity, Conservation and Attractions 'Nature Map', twenty (20) species of threatened and priority fauna have been recorded or sighted throughout the Shire of Williams, these are detailed below..

RARE OR LIKELY TO BECOME EXTINCT	PRESUMED EXTINCT	OTHER SPECIALLY PROTECTED FAUNA	PRIORITY 3	PRIORITY 4
• Bettongia penicillata subsp. ogilbyi (Woylie, Brush-tailed Bettong) • Calyptorhynchus banksii subsp. naso (Forest Red-tailed Black Cockatoo) • Calyptorhynchus baudinii (Baudin's Cockatoo, White-tailed Long-billed Black Cockatoo) • Calyptorhynchus latirostris (Carnaby's Cockatoo, White-tailed Short-billed Black Cockatoo) • Calyptorhynchus sp. (White-tailed Black Cockatoo) • Dasyurus geoffroii (Chuditch, Western Quoll) • Leipoa ocellata (Malleefowl) • Macrotis lagotis (Bilby, Dalgyte, Ninu) • Myrmecobius fasciatus (Numbat, Walpurti)	• Bettongia lesueur subsp. graii (Boodie (inland), Burrowing Bettong (inland))	• Falco peregrinus (Peregrine Falcon) • Phascogale calura (Red-tailed Phascogale, Kenngoor) • Phascogale tapoatafa subsp. wambenger (South-western Brush-tailed Phascogale, Wambenger)	• Acanthophis antarcticus (Southern Death Adder)	• Ctenotus delli (Dell's skink, Darling Range southwest Ctenotus) • Hydromys chrysogaster (Water-rat, Rakali) • Isoodon fusciventer (Quenda, southwestern brown bandicoot) • Notamacropus eugenii subsp. derbianus (Tammar Wallaby, Tammar) • Notamacropus irma (Western Brush Wallaby) P • Platycercus icterotis subsp. xanthogenys (Western Rosella (inland)


Red Tailed Phascogale


Woylie (Brush Tailed Bettong)


Forest Red Tailed Black Cockatoo


Southern Brown Bandicoot (Quenda)


Western Quoll (Chuditch)

Where possible, areas of environmental significance relating to priority fauna have been reflected on the BRMS. Due to the sensitive nature of information around protected fauna some discretion has been applied to the amount of information recorded so further advice will need to be sought from subject matter experts (DBCA, Landcare, Birdlife Australia etc.) to confirm the location of environmental assets and the potential impact of both mitigation and response strategies.

Important species and communities are listed on the Department of Biodiversity, Conservation and Attractions (DBCA) website. This website will be consulted with due diligence practiced to protect identified species and communities when planning and conducting appropriate bushfire mitigation activities.

3.11.1 Introduced Vegetation

Substantial clearing of the native vegetation in Williams has occurred over the years to make way for farmland and agricultural use. This trend aligns with broader patterns observed across various regions in Australia. The loss of native vegetation is a consequence of extensive land clearance driven by agricultural expansion, urban development, and other human activities.

Plantation:

Eucalypt and pine plantations, commonly cultivated for timber production, pose specific and heightened bushfire risks due to their unique characteristics. These risks include high fuel loads with highly flammable foliage and bark, rapid biomass production rates, and the presence of volatile essential oils in eucalyptus trees. The needle-like leaves of pine trees can easily ignite and contribute to the spread of fire, potentially leading to more intense crown fires. Additionally, these plantations are often monoculture, increasing vulnerability to widespread damage in the event of a fire.

The dense stands in these plantations can create challenging conditions for firefighting efforts, limiting access for firefighting resources. The combustibility of eucalypts and pine trees increases the risk of ember transport during a fire, potentially igniting new areas and exacerbating the overall fire risk. Effective risk management for these plantations involves a combination of preventive measures, such as firebreaks and thinning, along with preparedness measures, early detection, community education, and collaboration with firefighting agencies.

Agriculture:

The extensive clearance for agricultural purposes, necessitates a meticulous understanding and efficient management of introduced vegetation, encompassing crops, plantations, orchards, and weeds. This understanding is crucial in the context of mitigating the risk of bushfires.

The following section provides an in-depth examination of key characteristics and considerations pertinent to agricultural land use. In the realm of agricultural practices, the cultivation of ryegrass, wheat, oats, lupins, and canola is predominant. Each crop presents its own set of characteristics influencing bushfire risk, with variability contingent on factors such as the specific crop type, prevailing climate conditions, and the farming practices employed.

Oats (Cereal Grain):

Oats find applications in both animal feed and human consumption, such as oatmeal or granola. Characterised by a biomass production rate similar to wheat, oats generally carry a lower fuel load than ryegrass, contributing to a nuanced risk profile.

Wheat (Cereal Grain):

This cereal grain, cultivated for human and animal consumption, exhibits a lower biomass production rate compared to ryegrass. While generally associated with a lower fuel load, variations may arise based on the specific wheat type and farming practices.

Ryegrass:

Frequently utilised for forage, pasture, or as a cover crop, ryegrass serves purposes beyond direct human consumption. Notably, its high biomass production rate can result in a substantial fuel load, thereby influencing its impact on bushfire risk.

Lupins (Legumes):

Commonly grown for animal feed and soil improvement, lupins contribute to soil fertility through nitrogen fixation. Characterised by a lower biomass production rate compared to cereal grains, lupins are associated with a potentially lower fuel load.

Canola (Oilseed):

Recognised for its applications in cooking oil and biodiesel production, canola generally exhibits a lower biomass production rate. The specific characteristics of canola contribute to its unique impact on bushfire risk, requiring further exploration for comprehensive risk assessment.

As a general trend, cereal grains like oats and wheat typically entail higher fuel loads compared to legume crops such as lupins or oilseed crops. The precise fuel load of a specific crop is contingent upon several factors, including the particular crop variety, prevailing growing conditions, and farming practices implemented.

In addition to inherent crop characteristics, critical considerations arise from practices employed during the harvesting process, further influencing the overall bushfire risk associated with agricultural activities. These considerations underline the complexity and multifaceted nature of managing bushfire risk in the context of agricultural land use within the Shire

3.11.2 Fire Behaviour:

The dynamics of fire behaviour differ notably between agricultural farmland and native vegetation due to a myriad of factors influenced by land use and vegetation characteristics. In agricultural settings, crops, grasslands, and pastures emerge as primary fuel sources, particularly during dry seasons or harvest phases. These cultivated lands typically exhibit uniform and contiguous fuel loads, with expansive swathes of crops and grasses providing uninterrupted coverage.

Consequently, fires in such environments tend to propagate more swiftly compared to native vegetation. The denser and more consistent fuel distribution sustains continuous combustion, accelerating fire spread. Moreover, agricultural practices often entail the utilisation of dry, combustible materials such as crop residues or hay, which readily ignite and exacerbate fire progression.

Management protocols like plowing, harvesting, and grazing exert a profound influence on fuel characteristics and distribution within agricultural landscapes. Harvested fields, for instance, often leave behind stubble or crop residue, which serve as readily ignitable fuel sources, intensifying fire spread. Grazing activities may mitigate fuel loads in certain areas but can render others more susceptible to fire, contingent upon the timing and intensity of grazing practices.

Overall, the combination of densely packed, uniform fuel sources and open landscapes in agricultural areas creates conditions conducive to rapid intense fire spread, highlighting the importance of effective fire management strategies in these environments

3.12 Historical Bushfire Occurrence

Over the period of the last 5 years the Shire of Williams has had 68 reported bushfires within its boundaries. The numbers have stayed relatively consistent over the past 4 years, with unreported, suspicious and vehicles being attributed as the leading causes.

Bushfires within the Shire of Williams, with Ignition Cause

Bushfires are all vegetation fires (bush, grass, forest, crop etc..), of any size.

Ignition Cause	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Burn off fires	2	2	1	2	0
Campfires/bonfires/outdoor cooking	0	1	0	0	0
Power lines	0	2	0	0	0
Reignition of previous fire	1	1	1	1	0
Suspicious/Deliberate	2	1	0	1	0
Undetermined	0	0	0	1	1
Unreported	0	3	3	9	12
Vehicles (incl. Farming Equipment/Activities)	1	4	5	2	1
Weather Conditions - Lightning	2	2	1	0	1
Weather Conditions (High winds, natural combustion etc. Excludes Lightning)	0	1	0	0	1

The regions prone to bushfires within the Shire primarily comprise expansive agricultural lands, characterised by dry vegetation that serves as fuel, especially during specific seasons. Crop residues, grasslands, and dense vegetation in these areas are particularly susceptible to ignition. The interplay of dry environmental conditions, prevailing winds, and ongoing agricultural operations heightens the risk, underscoring the need for a comprehensive approach to address ignition sources and implement strategic measures.

Lightning strikes, especially prevalent during regional thunderstorms, are a common source of ignition. Human activities, including arson, electrical pole failures, further contribute to the overall ignition risk landscape. The Shire of Williams encounters a diverse range of ignition sources and bushfire-prone areas, presenting a multifaceted challenge for effective fire risk management.

To enhance preparedness and prevention strategies, the Shire's bushfire risk management plan prioritise addressing these key ignition sources and vulnerable regions. By focusing on these aspects, the Shire continuously develops measures to try and mitigate the risk effectively.

3.13 Bushfire Risk Controls

The Shire of Williams is dedicated to proactively mitigating the impact of bushfires through a multifaceted approach. Taking on the responsibility of overseeing fire mitigation and hazard reduction measures on its land, including parks, reserves, road reserves, recreation areas, and drainage reserves, the Shire implements an annual Bushfire Preventive Works program. This program encompasses various activities such as mechanical works, slashing, chemical spraying, and pruning, strategically designed to minimise fire risks and bolster overall fire safety

Current bushfire risk controls in the Shire of Williams

Control	Lead agency	Description
Burning Restrictions	Shire of Williams	The Shire enforces seasonal burning restrictions: Restricted Burning Periods – 29/09-31/10 and 15/02-29/03 Prohibited Burning Period – 01/11 – 14/02
Harvest and Vehicle Movement Bans	Shire of Williams / Chief Bush Fire Control Officer	A Harvest and Vehicle Movement Ban (HVMB) is a temporary restriction imposed by a local government to reduce the risk of bushfire ignition during periods of extreme fire danger. It is commonly applied in rural and agricultural areas, including the Shire of Williams, during summer and peak harvest seasons.
Total Fire Ban	DFES	A Total Fire Ban (TFB) is declared because of predicted extreme fire weather conditions or when widespread fires are seriously stretching firefighting resources. A TFB is declared by the Department of Fire and Emergency Services following consultation with local governments. TFB's apply to the whole local government and will often apply to more than one LG area.
Fire Control Orders and Firebreak Requirements	Firebreaks Local Law	Property owners are mandated to establish and maintain firebreaks as specified in the Shire's annual Fire Control Order. Non-compliance can result in penalties or the Shire undertaking the necessary work at the owner's expense.
Bush Fire Brigades and Volunteers	Boraning Congelin Culbin West Glenfield Narrakine Tarwonga	The Shire supports several volunteer bush fire brigades, including Boraning, Congelin, Culbin West, Glenfield, Narrakine, and Tarwonga. These brigades play a crucial role in fire prevention and response efforts.

Local Emergency Management Arrangements	LEMC Committee	The Shire's LEMA outlines strategies for emergency risk management, response coordination, and recovery processes, ensuring a structured approach to bushfire incidents.
Building Regulations in Bushfire-prone Areas	Shire of Williams	New constructions in designated bushfire-prone areas must comply with specific building standards to enhance resistance to bushfire attacks, as detailed in the "Building for Better Protection in Bushfire Areas" guide.
Community Education and Information	Shire of Williams	The Shire regularly publishes fire season newsletters and updates to inform residents about fire safety practices, restrictions, and emergency procedures.

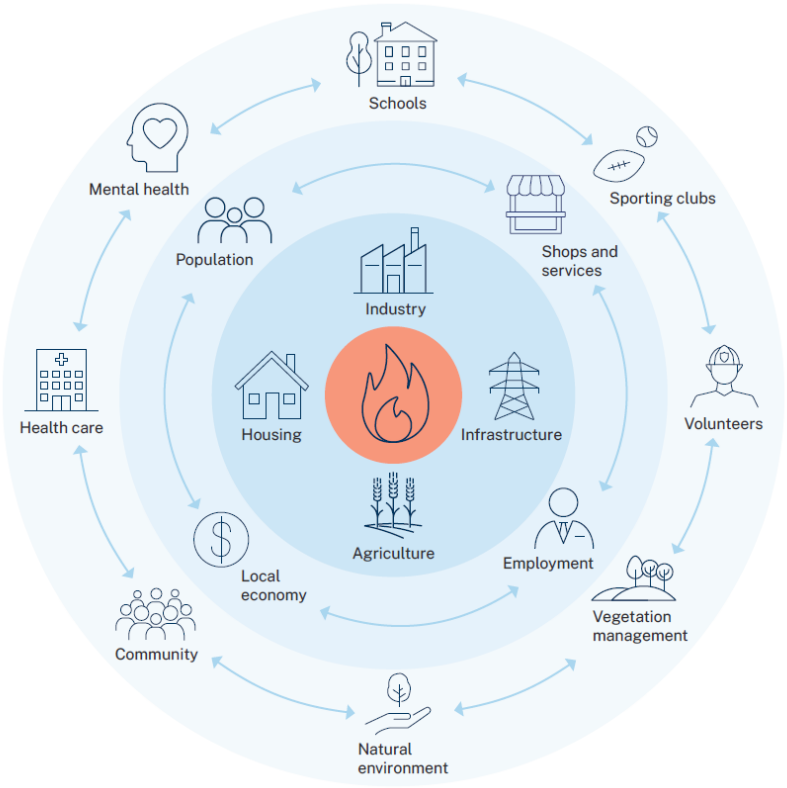
4 Asset Identification and Risk Assessment

Assets at risk from bushfire in The Shire of Williams are recorded in the *Asset Risk Register* in the BRMS. Assets are divided into four categories: human settlement, economic, climate, and cultural. Each asset has been assigned a bushfire risk rating between low and extreme based on the risk assessment methodology described in the Guidelines and Handbook.

4.1 Identifying and Assessing Cascading Risk

Cascading risk refers to the impacts of a bushfire on the interconnected systems and networks that sustain communities. The concept recognises that a bushfire event can set off a chain reaction with impacts that extend beyond the fire's location. These may affect the social fabric, economy, and environment of the district and can persist long after the fire has been extinguished.

Cascading risks considered relevant to BRM for The Shire of Williams are provided in Appendix A.



An example of cascading risk triggered by a bushfire can be seen in the above diagram. The things nearest the centre of the diagram are directly impacted by the fire with consequences that flow through to the next ring. These subsequent impacts, in turn, affect the things depicted in the outer ring. Effects also transmit back and forth between rings and around the rings because many of these elements are interconnected.

4.2. Local Government Asset Risk Profile

A summary of the risks assessed in the Shire of Williams is shown in Table 5. This table shows the proportion of assets at risk from bushfire in each risk category at the time the BRM Plan was endorsed. This table was correct at the time of publication but may become outdated as risks are treated or additional risks are identified and assessed. A report may be generated from the BRMS to provide the most current risk profile.

Table 5 Local Government Asset Risk Summary

Asset Category	Risk Rating					
		Low	Medium	High	Very High	Extreme
	Human Settlement	1%	55.45%	15.5%	9.25%	5.5%
	Economic		1%	3.5%	4.5%	0.5%
	Environmental			0.25%		0.25%
	Cultural		1.4%	1.4%		0.5%

The 'Guidelines for Preparing a Bushfire Risk Management Plan' requires that only assets considered of value and vulnerable to bushfire are to be included in this plan consequently not all assets within the Shire have been included in the assessments.

5 Risk Evaluation

5.1 Risk Acceptance Criteria

The acceptable level of risk for each asset category is shown in Table 6. A risk that is assessed as exceeding these limits will be considered for treatment.

Table 6 Risk acceptance criteria for bushfire risk in The Shire of Williams

	Asset category			
	Human settlement	**Economic**	**Environmental**	**Cultural**
Acceptable risk level	**MEDIUM**	**MEDIUM**	**HIGH**	**HIGH**

Risks below the acceptable level do not require treatment during the life of this BRM Plan. They will be managed by routine bushfire risk controls and monitored to detect any increase in their risk rating.

5.2 Treatment Priorities

The treatment priority for each asset is automatically assigned by BRMS, based on the asset's risk rating. Table 5 shows how consequence and likelihood combine to give the risk rating and subsequent treatment priority for an asset. The treatment priority assigned in BRMS will help inform decision making for risk acceptability and development of the Treatment Strategy and schedule.

Table 7 – Treatment priorities

Likelihood	**Consequence**				
		Minor	**Moderate**	**Major**	**Catastrophic**
	Almost Certain	3D (High)	2C (Very High)	1C (Extreme)	1A (Extreme)
	Likely	4C (Medium)	3A (High)	2A (Very High)	1B (Extreme)
	Possible	5A (Low)	4A (Medium)	3B (High)	2B (Very High)
	Unlikely	5C (Low)	5B (Low)	4B (Medium)	3C (High)

Risk Rating	Criteria for Acceptance of Risk	Course of Action

Extreme
(Priorities 1A, 1B, 1C)
	Requires asset specific treatment strategies to be applied.
	Treatment action is required within 2 years of the plan being endorsed.
	It is unlikely that Local Government Wide Controls would be adequate to manage the risk.
		• Specific action(s) required in the first 2 years of the BRM Plan where resourcing and funding permits
		• Priorities will include
		  • treatments that will have maximum benefit to multiple assets and critical infrastructure
		  • Identification of partnerships with other agencies for strategic mitigation
		• Assets within the townsite to be included on Fire Break inspection list
		• Communication with stakeholders as per the Communications Plan

Very High
(Priorities 2A, 2B, 2C)
	Requires asset specific treatment strategies to be applied.
	Treatment action is required with 2 years of the plan being endorsed.
	It is unlikely that Local Government Wide Controls would be adequate to manage the risk.
		• Specific action(s) required in the first 2 – 3 years of the BRM Plan where resourcing and funding permits
		• Priorities will include
		  • treatments that will have maximum benefit to multiple assets and critical infrastructure
		  • Identification of partnerships with other agencies for strategic mitigation
		• Assets within the townsite to be included on Fire Break inspection list
		• Communication with stakeholders as per the Communications Plan

High
(Priorities 3A, 3B, 3C, 3D)
	Asset specific treatment strategies will likely be required to adequately manage the risk.	• Specific action(s) required in the first 4 years of the BRM Plan where resourcing and funding permits
		• Priorities will include
		  • Assets that fall adjacent to Extreme or Very High risk assets
		  • treatments that will have maximum benefit to multiple assets and critical infrastructure
		  • Identification of partnerships with other agencies for strategic mitigation
		• Risk assessments to be reviewed at least once within the life of the plan
		  • Communication with stakeholders as per the Communications Plan

Medium **(Priorities 4A, 4B, 4C)**	Asset specific treatments are not required, but risk should be monitored. Local government wide controls should be sufficient to manage the risk If there is a change in the landscape / environment these assets may need to be reassessed more frequently.	• Addressed through Local Government Wide Controls • Specific action is not required
Low **(Priorities 5A, 5B, 5C)**	Asset specific treatments are not required, but risk should be monitored. Local government wide controls should be sufficient to manage the risk If there is a change in the landscape / environment these assets may need to be reassessed more frequently.	• Addressed through Local Government Wide Controls and/or Community Education • Specific action is not required

6 Risk treatment

The purpose of risk treatment is to reduce the potential impact of bushfire on the community, economy and environment. This is achieved by implementing treatments that modify the characteristics of the hazard, the community or the environment to make bushfires less likely or less harmful.

6.1 Treatment Strategy

The Treatment Strategy describes the overall approach to managing bushfire risk in the medium to long term in The Shire of Williams. The strategy is shaped by factors such as the distribution of risk in the landscape, the community's values and objectives, stakeholders' mitigation programs and constraints on treatment options. The Treatment strategy helps guide the development of integrated annual treatment schedules.

In the context of bushfire risk management in the shire, the treatment strategy is instrumental in aligning treatment preferences with the vulnerability of elements such as land use patterns, sensitive industries, vegetation types, and resource accessibility. This ensures a targeted and risk-informed approach to treatment selection. Recognising the diverse ecosystems and landscapes within the district, the treatment strategy emphasises the need for individualised methods tailored to effectively manage and reduce bushfire risk. Different parts of the district require interventions that align with their unique characteristics, emphasising a strategic and adaptive approach to bushfire risk treatments.

The treatment strategies are designed to reduce the likelihood and consequence of bushfire impacts on life, property, infrastructure, and the environment. These strategies are guided by Western Australia's Bushfire Risk Management Framework and tailored to the Shire's rural-agricultural landscape, vegetation types, and community structure.

BUSHFIRE TREATMENT STRATEGIES			
TREATMENT	**OBJECTIVE**	**STRATEGIES**	**RESPONSIBILITY**
Vegetation and Fuel Load Management	Lower fire intensity and spread potential by reducing available vegetation (fuel)	• Prescribed burning on reserves and strategic bushland. • Slashing or mulching of roadside vegetation and paddock edges. • Grazing regimes to manage fuel loads on private rural land. • Firebreak compliance enforcement on private properties. • Removal of unmanaged regrowth on Shire land.	Shire of Williams DFES DBCA Private landowners Bush Fire Brigades

Asset Protection Zones	Protect life and property from direct flame and radiant heat	• Establish and maintain cleared buffer zones around:
		  • Key community infrastructure
		  • Critical utilities
		  • Isolated rural dwellings
			Shire of Williams
			Landowners
			DFES

Community Education and Engagement	Empower residents with knowledge to prepare and act safely	• Deliver seasonal fire preparedness newsletters and update residents on bans and safety advice • Promote "Bushfire Ready" advice to all residents. • Encourage preparation of personal Bushfire	Shire of Williams
Fire Access and Infrastructure	Improve response effectiveness and access to remote fire areas	• Maintain and upgrade fire access tracks across reserves and agricultural land. • Ensure reliable water points for firefighting (standpipes, tanks) with signage and location marking. • Audit and maintain strategic firefighting infrastructure, such as fire units and fast fill trailers.	Shire of Williams Volunteer Brigades

Building and Planning Controls	Reduce vulnerability of future development	• Apply Bushfire Attack Level (BAL) assessments for new developments in bushfire prone areas. • Integrate bushfire risk considerations into local planning policies and subdivision approvals.	Shire of Williams DPLA DFES
Harvest and Vehicle Movement Ban Enforcement	Prevent machinery-related fire ignitions	• Continue use of real-time weather data to implement harvest bans on high-risk days • Collaborate with landholders to ensure compliance and understanding of protocols	Shire of Williams CBFCO Landowners
Brigade Support and Interagency Coordination	Strengthen local response capability and coordination	• Support bushfire brigades through equipment and training. • Conduct joint exercises with DFES and DBCA. • Integrate treatments into LEMA	Shire of Williams DFES DBCA Volunteer Brigades
Monitoring, Review, and Adaptive Management	Maintain a current responsive plan	• Use BRMS to track treatment progress and outcomes • Undertake annual reviews and update priority areas.	Shire of Williams DFES

6.2 Treatment Schedule

The Treatment Schedule is a list of bushfire risk treatments recorded in the BRMS. It is developed regarding the outcome of the risk assessment process and Treatment Strategy and in consultation with stakeholders.

A treatment schedule for the Shire of Williams has been entered to BRMS. This is a live document and will be regularly updated throughout the life of the BRM Plan.

Land managers are responsible for implementing agreed treatments on their own land. This includes costs associated with the treatment and obtaining the relevant approvals, permits or licenses to undertake an activity. Where agreed, another agency may manage a treatment on behalf of a land manager.

7 Monitoring and Review

Monitoring and review processes are in place to ensure that the BRM Plan remains current and considers the best available information.

7.1 Monitoring and review

The Shire of Williams will monitor the BRM Plan and BRMS data to identify any need for change. The Plan and BRMS data will be reviewed at least every two years to ensure they continue to reflect the local context, assets at risk, level of risk and treatment priorities.

7.2 Reporting

The Shire of Williams CEO or their delegate will provide to OBRM the outcomes of the two-year review of the BRM Plan. This is required to maintain OBRM endorsement of the Plan.

The Shire of Williams will contribute information about their BRM Program to the annual OBRM *Fuel Management Activity Report*.

Appendix A Cascading risk

This template is provided to record any cascading risks identified during the development of the BRM Plan. Refer to section 6.2 and 6.4 of the *Guidelines for Preparing a Bushfire Risk Management Plan*.

T rigger event	Sequence of events	Risk criteria	Treatment	Stakeholders	Notes
Describe the initial impact likely to trigger cascading risk	Describe the subsequent effects triggered by the initial impact. If a subsequent effect triggers a new cascading risk, enter it as a new trigger event	Who or what will be affected, for how long and how severe will the impacts be?	What and where are the opportunities to intervene to stop the risk cascade or reduce the severity or longevity of impacts?	Who would need to be involved to implement the treatment? Identify treatment owners where possible.	
Major Bushfire Ignition	• Vegetation & Infrastructure burn • Power infrastructure damaged • Telecommunication services fail • Community looses access to emergency warnings and communication	Disruption to critical communications and public safety	Backup power for key telecom sites Community fire education Local radio protocols	Shire of Williams DFES Telstra Emergency Services	Communication blackspots increase risk in remote localities
High-Intensity bushfire near farmland	Fences destroyed and livestock escape Crops and machinery damaged Disruption to farm income and regional supply chains	Economic impact on primary producers	Insurance access support Pre-season firebreak inspections Fire response coordination	Landowners Shire of Williams DPIRD Insurers	Recovery can take multiple seasons Stress on small scale producers
Bushfire damages main roadways	Road closed due to smoke and fire Isolation of communities and delayed emergency response Supply chain disruption (fuel, food, equipment)	Access and logistics disruption Community isolation	Diversion planning Emergency supply stockpiles Alternate route maintenance	Main Roads WA Shire of Williams DFES Transport Operators	Critical during harvest and holiday seasons
Post-fire rainfall event	Vegetation removed by fire Heavy rain causes soil erosion and sediment flow Degradation of riparian zones and water quality issues	Environmental degradation and ecosystem impact	Post-Fire land stabilization Erosion control Revegetation programs	DBCA Shire of Williams Landholders	Common in degraded or recently cleared catchments