



**City of Wanneroo**

## **Bushfire Risk Management Plan**

**2019 – 2024**

Office of Bushfire Risk Management (OBRM) Bushfire Risk Management (BRM) Plan  
reviewed *28 February 2019*

Local Government Council BRM Plan endorsement *09 April 2019*

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## Disclaimer

In approving this BRM Plan, the City of Wanneroo (the City) is acknowledging the assets that have been identified and the risk ratings and treatment priorities assigned. Approval of the plan is a commitment by the City to work with land owners and managers to address unacceptable risk within the community. Endorsement of this plan is not committing the City 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 management by the City.

## Document Control

<b>Document Name</b>	Bushfire Risk Management Plan	<b>Current Version</b>	1.0
<b>Document Owner</b>	City of Wanneroo	<b>Issue Date</b>	
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## Document Endorsements

City of Wanneroo Council endorses that the Bushfire Risk Management Plan (BRM Plan) has been reviewed and assessed by the Office of Bushfire Risk Management (OBRM) as compliant with the standard for bushfire risk management planning in Western Australia, the *Guidelines for Preparing a Bushfire Risk Management Plan*. The City of Wanneroo (the City) is the owner of this document and has responsibility, as far as is reasonable, to manage the implementation of the Bushfire Risk Management Plan and facilitate the implementation of bushfire risk management treatments by risk owners. The endorsement of the BRMP by the City of Wanneroo Council satisfies their endorsement obligations under *State Hazard Plan – Fire (interim)*.

Local Government	Representative	Signature	Date
City of Wanneroo	Chief Executive Officer		

## Amendment List

Version	Date	Author	Section
1.1	29/10/18	R Greer T Cole P Postma	Initial version submitted to OBRM for compliance review
1.2	18/01/2019	R Greer P Postma M Culhane	All

## Publication Information

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## **Privacy and Release of Information**

Information captured through the Bushfire Risk Management System (BRMS) includes data that is considered sensitive, such as the location of culturally and environmentally significant sites, land ownership details and risk information.

The Chief Executive Officer is to be consulted prior to public release of any data relating to the City of Wanneroo Bushfire Risk Management Plan.

# 1. Introduction

## 1.1 Background

Under the *State Hazard Plan Fire (interim)* (OEM 2017) an integrated Bushfire Risk Management Plan (BRM Plan) is to be developed for local government areas with significant bushfire risk. This BRM Plan has been prepared for the City of Wanneroo in accordance with the requirements of *State Hazard Plan Fire* and the *Guidelines for Preparing a Bushfire Risk Management Plan* (Guidelines) (OBRM 2015). The risk management processes used to develop this BRM Plan are aligned to the key principles of *AS/NZS ISO 31000:2009 Risk management – Principles and guidelines*, as described in the Second Edition of the *National Emergency Risk Assessment Guidelines* (NERAG 2015). This approach is consistent with the policies of the *State Emergency Management Policy (State EM Policy)* 3.2 – *Emergency Risk Management Planning*.

This BRM Plan is a strategic document that identifies assets at risk from bushfire and their priority for treatment. The Treatment Schedule sets out a broad program of coordinated multi-agency treatments to address risks identified in the BRM Plan. Government agencies and other land managers responsible for implementing treatments participate in developing the BRM Plan to ensure treatment strategies are collaborative and efficient, regardless of land tenure.

Assets, risk assessments and treatment data is stored and maintained in an electronic database – the Bushfire Risk Management System (BRMS). City personnel will have access to the City of Wanneroo data and are able to produce reports including the Asset Risk Register and Treatment Schedule as well as detailed maps.

This BRM Plan consists of:

- Bushfire Risk Management Plan
- Communications Strategy (Appendix 1)
- Planning Area Map (Appendix 2)
- Asset Risk Register (Appendix 3)
- Local Government Wide Controls & Multi Agency Work Plan (Appendix 4)
- Treatment Schedule (to be completed within 12 months of endorsement of the BRM Plan)

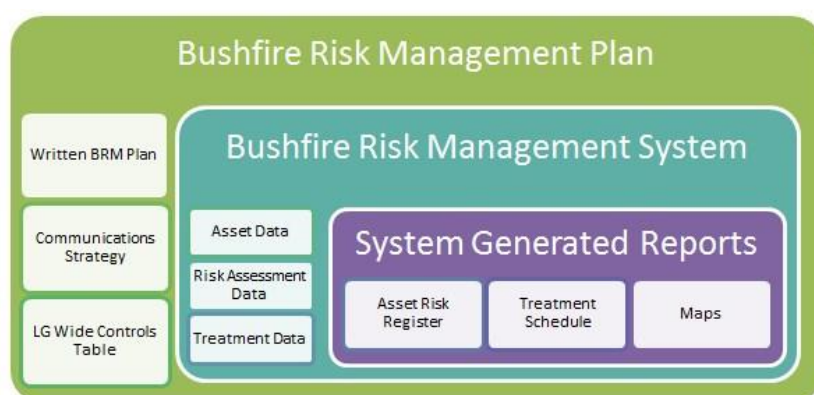


Figure 1 – Components of the Bushfire Risk Management Plan

## 1.2 Aim and Objectives

The aim of the BRM Plan is to document a coordinated and efficient approach toward the identification, assessment and treatment of assets exposed to bushfire risk within the City of Wanneroo.

The objective of the BRM Plan is to effectively manage bushfire risk within the City of Wanneroo in order to protect people, assets and other things of local value. Specifically, the objectives of this BRM Plan are to:

- Guide and coordinate a tenure blind, multi-agency bushfire risk management program over a five year period;
- Document the process used to identify, analyse and evaluate risk, determine priorities and develop a plan to systematically treat risk;
- Facilitate the effective use of the financial and physical resources available for bushfire risk management activities;
- Integrate bushfire risk management into the business processes of local government, land owners and other agencies;
- Ensure there is integration between land owners and bushfire risk management programs and activities;
- Monitor and review the implementation of treatments to ensure treatment plans are adaptable and risk is managed at an acceptable level.

## 1.3 Legislation, Policy and Standards

The following legislation, policy and standards were considered to be applicable in the development and implementation of the BRM Plan.

### 1.3.1 Legislation

- Bush Fires Act 1954
- Emergency Management Act 2005
- Fire Brigades Act 1942
- Fire and Emergency Service Act 1998
- Conservation and Land Management Act 1984
- Environmental Protection Act 1986
- Environmental Protection and Biodiversity Conservation Act 1999
- Local Government Act 1995
- Wildlife Conservation Act 1950
- Aboriginal Heritage Act 1972
- Metropolitan Water Supply, Sewerage and Drainage Act 1909
- Country Areas Water Supply Act 1947
- Building Act 2011
- Bush Fires Regulations 1954
- Emergency Management Regulations 2006
- Planning and Development (Local Planning Scheme) Regulations 2015

### **1.3.2 Policies, Guidelines and Standards**

- National Emergency Risk Assessment Guidelines (NERAG) (Second Edition 2015)
- State Emergency Management Policy 2.5 – Local Arrangements
- State Emergency Management Policy 3.2 – Emergency Risk Management Planning (OEM)
- State Emergency Management Prevention Procedure 1 – Emergency Risk Management Planning (OEM)
- State Emergency Management Preparedness Procedure 7 – Local Emergency Management Committee (LEMC)
- State Emergency Management Preparedness Procedure 8 – Local Emergency Management Arrangements (OEM)
- State Hazard Plan Fire (Interim) (OEM)
- State Planning Policy 3.7: Planning in Bushfire Prone Areas (WAPC)
- State Planning Policy 3.4: Natural Hazards and Disasters (WAPC)
- Guidelines for Planning in Bushfire Prone Areas (WAPC 2017)
- Western Australian Emergency Risk Management Guidelines (OEM 2015)
- A Guide to the Use of Pesticides in Western Australia (Dept. of Health 2010)
- Guidelines for Plantation Fire Protection (DFES 2011)
- Firebreak Location, Construction and Maintenance Guidelines (DFES)
- Building Protection Zone Standards (DFES)
- Bushfire Risk Management Planning – Guidelines for preparing a Bushfire Risk Management Plan (2015)
- AS/NZS ISO 31000:2009 - Risk management – Principles and guidelines
- AS 3959-2009 Construction of buildings in bushfire-prone areas
- City of Wanneroo Firebreak Notice

### **1.3.3 Other Related Documents**

- National Strategy for Disaster Resilience
- National Statement of Capability for Fire and Emergency Services (AFAC 2015)
- Public Service Circular No. 88 Use of Herbicides in Water Catchment Areas (Dept. of Health 2007)
- Code of Practice for Timber Plantations in Western Australia (Forest Products Commission Second Edition 2014)
- Bushfire Risk Management Planning Handbook (DFES)
- Bushfire Risk Management System (BRMS) User Guide (DFES)
- City of Wanneroo Local Emergency Management Arrangements (full review 2017)
- Local Emergency Management Welfare Support Plan
- Local Welfare Support Sub Plan Wanneroo Welfare Centres
- Aged Care Support Plan
- Barbagallo Raceway Risk Management Plan
- City of Wanneroo Biodiversity Strategy – 2018/19 – 2023/24
- City of Wanneroo Local Environmental Strategy 2018
- City of Wanneroo Environmental Management Plan Guidelines 2018
- City of Wanneroo Local Planning Policy Conservation Reserves 2018
- City of Wanneroo Tree Preservation Policy



- City of Wanneroo Planning and Sustainability Local Planning Policy Public Open Space 2018
- City of Wanneroo Coastal Management Foreshore Plans (Amberton, Yanchep Capricorn – Parts 1 and 2)
- Coastal Hazard Risk Management Adaption Plan
- Coastal Management Plan
- Foreshore Management Plan Assessment Management Process
- Surf Life Saving – Coastal Aquatic Risk Assessment
- Yellagonga Integrated Catchment Management Plan 2015-2019
- Weed Management Plan

## 2. The Risk Management Process

The risk management processes used to identify and address risk in this BRM Plan are aligned with the international standard for risk management, AS/NZS ISO 31000:2009, as described in NERAG (2015). This process is outlined in Figure 1 below.

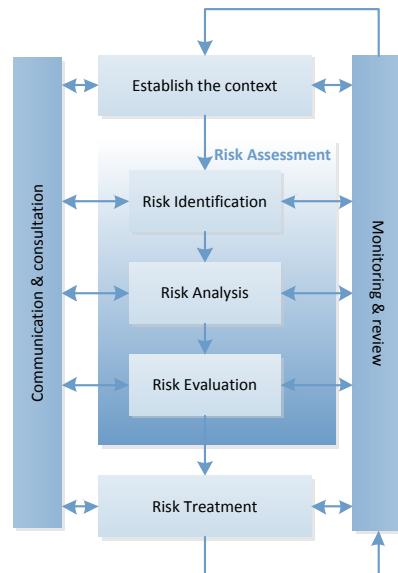


Figure 2 – Risk Management Process <sup>1</sup>

### 2.1 Roles and Responsibilities

The following table outlines the roles and responsibilities of key stakeholders tasked with the development, implementation, monitoring and review of the Bushfire Risk Management Plan and resulting 'Treatment Schedule'.

Stakeholder Name*	Roles and Responsibilities
<b>Local Government</b>	<ul style="list-style-type: none"> <li>▪ As custodian of the BRM Plan, coordination of the development, implementation and ongoing review of the integrated BRM Plan.</li> <li>▪ Negotiation of commitment from land owners to treat risks identified in the BRM Plan.</li> </ul>

<sup>1</sup> Source: AS/NZS ISO 31000:2009, Figure 2, reproduced under SAI Global copyright Licence 1411-c083.

Stakeholder Name*	Roles and Responsibilities
	<ul style="list-style-type: none"> <li>▪ As treatment manager, implementation of treatment strategies for LG owned land.</li> <li>▪ As part of the approval process, submission of the draft BRM Plan to the Office of Bushfire Risk Management (OBRM) to review it for consistency with the Guidelines.</li> <li>▪ As part of the approval process, submission of the final BRM Plan to Council for their endorsement and adoption.</li> </ul>
<b>Department of Fire and Emergency Services (DFES)</b>	<ul style="list-style-type: none"> <li>▪ Participation in and contribution to the development and implementation of BRM Plan, as per their agency responsibilities under the <i>State Hazard Plan Fire (interim)</i> Hazard Management Agency.</li> <li>▪ Support to local government through expert knowledge and advice in relation to the identification, prevention and treatment of bushfire risk.</li> <li>▪ Facilitation of local government engagement with state and federal government agencies in the local planning process.</li> <li>▪ Undertake treatment strategies, including prescribed burning on behalf of Department of Planning Lands and Heritage for Unmanaged Reserves and Unallocated Crown Land within gazetted town site boundaries.</li> <li>▪ In accordance with Memorandums of Understanding and other agreements, implementation of treatment strategies for other landholders.</li> </ul>
<b>Office of Bushfire Risk Management (OBRM)</b>	<ul style="list-style-type: none"> <li>▪ Under the OBRM Charter, to ensure bushfire risk is managed in accordance with AS/NZS ISO 31000 and reporting on the state of bushfire risk across Western Australia.</li> <li>▪ Review BRM Plans for consistency with the Guidelines prior to final endorsement by council.</li> </ul>
<b>Department of Biodiversity, Conservation and Attractions - Parks and Wildlife Service (PaWS)</b>	<ul style="list-style-type: none"> <li>▪ Participation in and contribution to the development and implementation of BRM Plans.</li> <li>▪ Providing advice for the identification of environmental assets that are vulnerable to fire and planning appropriate treatment strategies for their protection.</li> <li>▪ As treatment manager, implementation of treatment strategies on department managed land and for Unmanaged Reserves and Unallocated Crown Land outside gazetted town site boundaries.</li> <li>▪ In accordance with Memorandums of Understanding and other agreements, implementation of treatment strategies for other landholders.</li> </ul>
<b>Other State and Federal Government Agencies</b>	<ul style="list-style-type: none"> <li>▪ Assist the local government by providing information about their assets and current risk treatment programs.</li> <li>▪ Participation in and contribution to the development and implementation of BRM Plans.</li> <li>▪ As treatment manager, implementation of treatment strategies.</li> </ul>
<b>Public Utilities</b>	<ul style="list-style-type: none"> <li>▪ Assist the local government by providing information about their assets and current risk treatment programs.</li> <li>▪ Participation in and contribution to the development and implementation of BRM Plan.</li> <li>▪ As treatment manager, implementation of treatment strategies.</li> </ul>

Stakeholder Name*	Roles and Responsibilities
Corporations and Private Land Owners	<ul style="list-style-type: none"> <li>As treatment manager, implementation of treatment strategies.</li> </ul>

Table 1 – Roles and Responsibilities

## 2.2 Communication & Consultation

Communication and consultation throughout the risk management process is fundamental to the preparation of an effective BRM Plan. To ensure appropriate and effective communication occurred with stakeholders in the development of the BRM Plan, a *Communication Strategy* was prepared. The strategy is provided at **Appendix 1**

## 3. Establishing the Context

The City of Wanneroo acknowledges its responsibility in all areas of Prevention, Preparedness, Response and Recovery. This Bushfire Risk Management Plan (BRM Plan) outlines strategic level planning through a tenure blind approach within the City of Wanneroo. This Bushfire Risk Management Plan will further strengthen coordination within and between agencies and organisations in the City of Wanneroo, linkages between policy planning, operational delivery and the monitoring and evaluation of mitigation works in the City of Wanneroo will be strengthened. This Bushfire Risk Management plan will also assist in identifying and integrating best practice into the planning and delivery of prescribed fire programs in the City of Wanneroo. The objective of the mitigation program is to ensure that life and property within the community is given the best protection from high intensity and devastating bushfires.

The City's Community Safety and Emergency Management Team, inclusive of the Volunteer Bush Fire Brigades work vigorously to ensure the safety of the community within the City of Wanneroo, while maintaining environmental, ecological and sociological impacts. This Bushfire Risk Management Plan has been built on the City's values of remaining customer focused delivering service excellence. Maintaining accountability and accepting responsibility meeting commitments to a high standard, along with high levels of collaboration across departments. In accordance with these requirements, defined risk treatments and actions should be incorporated as prevention strategies. This Bushfire Risk Management Plan has been developed to meet the requirements of State Hazard Plan Fire-Interim to provide 'integrated hazard reduction programs for fuel removal and/or modification by manual and prescribed burning methods. This document and accompanying maps together form part of the overall Bushfire Risk Management Plan for the City of Wanneroo.

### 3.1 Description of the Local Government and Community Context

#### 3.1.1 Strategic and Corporate Framework

The Bushfire Risk Management Plan has been established to develop strategies to effectively plan for and mitigate the potential adverse effects of bushfire within the City of Wanneroo. Responsibility for the BRM Plan process sits with the City of Wanneroo Chief Executive Officer (CEO), however; the management and implementation of the plan is the responsibility of the Director Community and Place, Community Safety and Emergency Management Service Unit, which includes the City Chief Bush Fire Control Officer who also

holds the role of Community Emergency Services Manager who supports the implementation and identification of bushfire risk areas and recommends appropriate treatment options. The City also employs a Fire Protection Officer who is responsible for maintaining and updating the BRM Plan. The effective implementation of this plan is reliant on the engagement and involvement of multiple stakeholders, the City's responsibility is to facilitate the management of bushfire risk to the community as supported by the provision of this plan.

The BRM Plan will play an integral part of the City of Wanneroo Strategic Community Plan (SCP) 2017/18 – 2026/27 which represents the City's approach to planning, and sets out the vision and aspirations for the community for the next 10 years, by working to strengthen the City's capacity to achieve its overall vision.

Community aspirations expressed through the SCP consultation process have informed and shaped the four priority themes of Council, these being:

<b>SOCIETY</b> Healthy, safe, vibrant and connected communities	Health and Active People Safe Communities Distinctive Places Connected Communities
<b>ECONOMY</b> Progressive, connected communities that enable economic growth and employment	Local Jobs Strategic Growth Smart Business Places of Destination
<b>ENVIRONMENT</b> A healthy and sustainable natural and built environment	Resource Management Enhanced Environment Reduce, Reuse, Recycle Waste Activated Places Connected and Accessible City Housing Choice
<b>CIVIC LEADERSHIP</b> Working with others to ensure the best use of our resources	Working with Others Good Governance Progressive Organisation

The two priority themes of Council that directly relate to this BRM Plan include Society and Environment. These include the following; The City should work with partners to improve safety, particularly in more isolated communities and planning for and managing fire and other risks continue to be an important priority for the community. This BRM Plan will ensure these outcomes are achieved and monitored through integrating the City of Wanneroo specific documents as outlined in section 1.3.3 – other related documents.

The City 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 the BRM Plan.

The Local Emergency Management Committee (LEMC) and District Emergency Management Committee (DEMC) have endorsed the Local Emergency Management Arrangements (LEMA) for the City of Wanneroo. Part of the development of the LEMA included the development of local emergency management risk register schedule which outlines the identified risks within the City, including risk levels and treatment options.

The City has an active Bushfire Advisory Committee (BFAC) with membership holding considerable bushfire firefighting skills and experience. The BFAC representatives will be integral to the development and review of the plan.

Risk management is a critical component of the emergency risk management process. Building a sound understanding of the hazards and risks likely to impact the community enable the City of Wanneroo and its LEMC to work together to implement treatments. This process helps to build the capacity and resilience of the community and organisations which enable them to better prepare for, respond to and recover from a major emergency. The process and mandate for the City to undertake risk management is detailed in State Emergency Management Policy Section 3.2.

The City's Emergency Risk Register is a standalone document which supports the LEMA and includes all identified risks associated with the hazards assessed and their risk level.

Those risks which were rated as having an extreme or high risk level and achieved a treatment of priority 1 or 2 (requires treatment) include identified treatment strategies. Bushfire hazard has been identified as a high risk to the City and the implementation of treatment strategies are the responsibility of the Hazard Management Agency (HMA), Support Agencies and the City.

The City's LEMA identifies the following critical infrastructure within its jurisdiction:

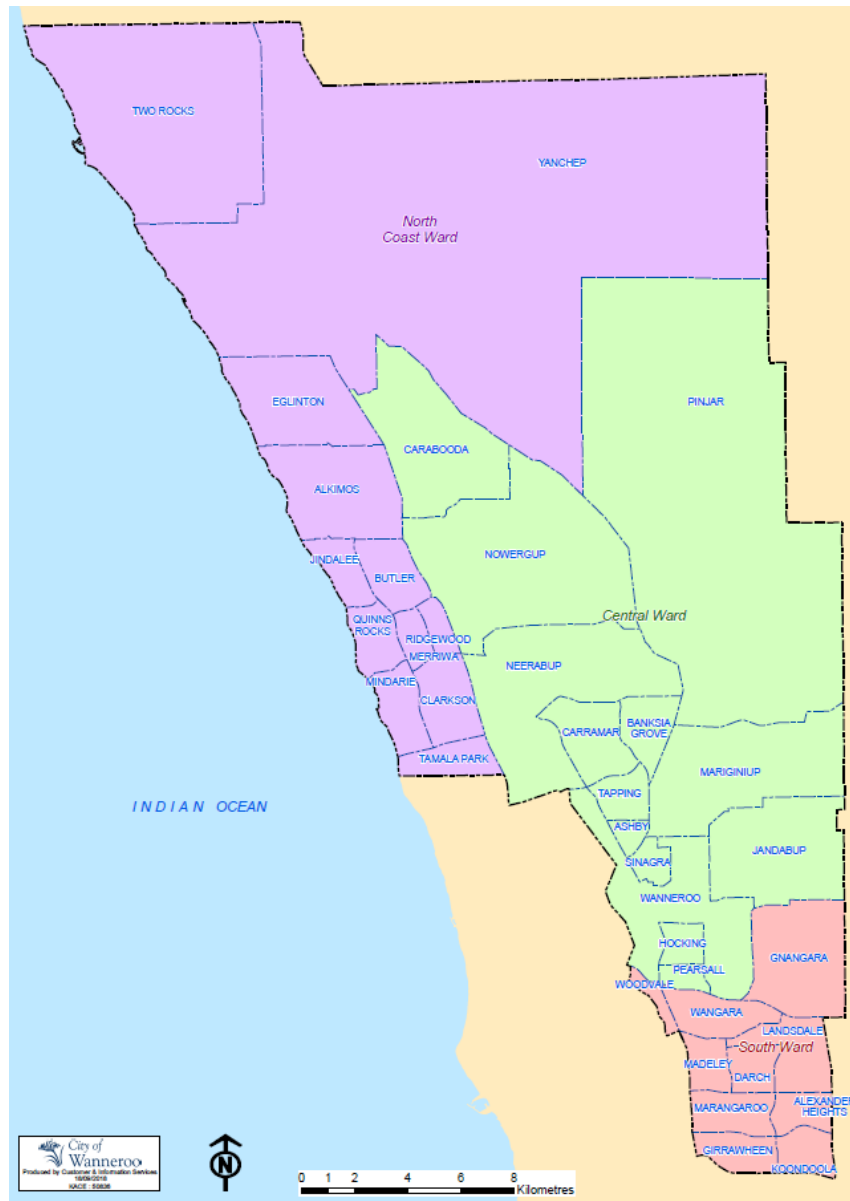
- Major Roads
- Railway
- Telecommunication Towers
- Water Tower
- Water Bores
- Sewerage Plant
- Power Station
- Gas Pipelines
- Wanneroo Super Clinic/Medical Centres
- Service Stations
- Jetties (Mindarie, Two Rocks)
- Bridges/Overpasses
- Volunteer Bush Fire Brigade Fire Stations (4)
- SES Unit (1)
- Community Centres (Identified Evacuation/Welfare Centres)
- Ashby Operations Centre (Local Emergency Recovery Coordination Centre)

These assets may not be directly impacted by bushfire, however are critical for the City's ability to support response and recovery efforts in the event of a large scale bushfire incident.

### **3.1.2 Location, Boundaries and Tenure**

The City of Wanneroo is located 25Km from the Perth CBD and covers a land mass of 685.8 square kilometres. The City of Wanneroo is bounded by Beach Road and the City of Stirling to the South, Alexander drive and the City of Swan to the East, Wanneroo Road and Lake Joondalup to the South West, the Indian Ocean to the West and the Shire of Gingin to the North.

The City of Wanneroo is split into three Wards. The **North Coastal Ward** consisting of the following suburbs, Alkimos, Butler, Clarkson, Eglinton, Jindalee, Merriwa, Mindarie, Quinns Rocks, Ridgewood, Tamala Park, Two Rocks, Yanchep. The **Central Ward** consists of Ashby, Banksia Grove, Carabooda, Carramar, Hocking, Jandabup, Mariginiup, Neerabup, Nowergup, Pinjar, Pearsall, Sinagra, Tapping, Wanneroo and the **South Ward** includes the suburbs of Alexander Heights, Darch, Girrawheen, Gngangara, Koondoola, Landsdale, Madeley, Marangaroo, Wangara, Woodvale.



*Figure 3: City of Wanneroo Ward Map (Source: City of Wanneroo)*

The City of Wanneroo engages with private landowners to educate them on their responsibilities relating to fire management specifically in bushfire prone areas deemed as having extreme and very high risk. The other major land tenure falls within the Department of Biodiversity Conservation and Attractions (DBCA) and the Department of Planning Lands and Heritage (DPLH). Both of these stakeholders meet regularly with City of Wanneroo Fires Services and with Community Safety and Emergency Management Officers.

Land Manager/Owner	Government Type	Freehold Ownership (ha)	Crown Ownership (ha)	Total (ha)	% of Plan Area	Road Area
City of Wanneroo	Local Government	339		339	0.50%	
7 LGA's Wanneroo, Joondalup, Perth, Stirling, Vincent, Wanneroo, Cambridge, Victoria Park	Other Local Governments (Tamala Park)	279		279	0.41%	
Department of Biodiversity Conservation & Attractions (DBCA)	State	10	3,2078	32,088	46.88%	Nil
Department of Planning Lands & Heritage (DPLH)	State	4,948	8,360	13,308	19.44%	Includes 3787 ha of public road in 8360 ha
Other Government	State	2,849	758	3,607	5.27%	12 ha of public road
Other Government	Commonwealth	1.9	0.1	2	0.00%	
Freehold (Private Ownership)		18,680		18,680	27.29%	
Coastal UCL			141	141	0.21%	
<b>TOTAL AREA (Hectares)</b>				<b>68,444</b>	<b>100.00%</b>	

*Table 2: Land Tenure Breakdown within the City of Wanneroo (Source: City of Wanneroo)*



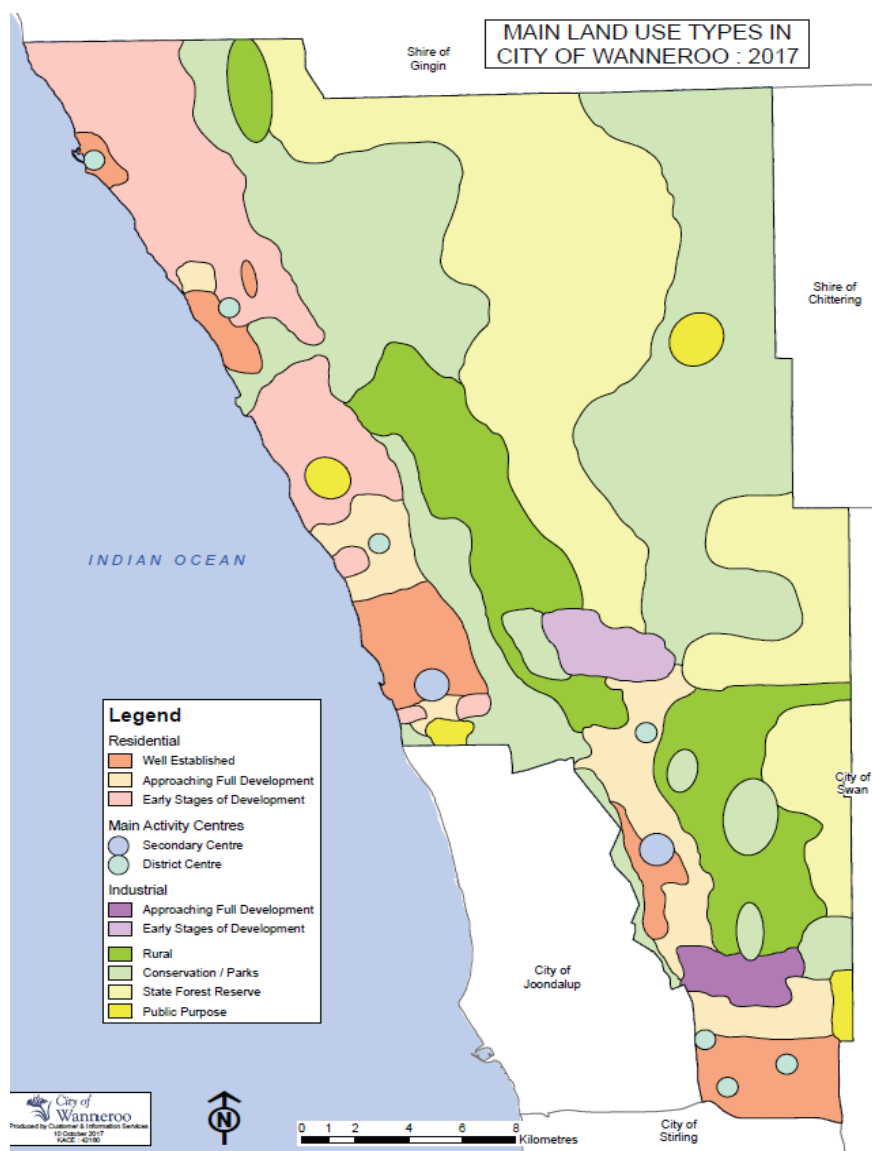


Figure 4: Main Land Use Types in City of Wanneroo (Source: City of Wanneroo)

### 3.1.3 Population and Demographics

In the 2017 Census, there were 207,168 people in Wanneroo. Of these 49.4% were male and 50.6% were female. Aboriginal and/or Torres Strait Islander people made up 1.4% of the population. The median age of people in Wanneroo was 33 years. Children aged 0 - 14 years made up 23.0% of the population and people aged 65 years and over made up 9.9% of the population in Wanneroo. 52.7% of people were born in Australia. The most common countries of birth were England 13.1%, New Zealand 3.8%, South Africa 3.2%, Vietnam 1.8% and Scotland 1.8%. In Wanneroo 74.0% of people only spoke English at home. Other languages spoken at home included Vietnamese 2.7%, Afrikaans 1.6%, Arabic 1.0%, Gujarati 0.9% and Mandarin 0.9%.

The population statistics in Table 4 below, demonstrates the breakdown of age groups within the City. The high level of very young and elderly residents presents additional challenges with respect to response and recovery efforts during a bushfire incident.

On the day of the Census, the most common methods of travel to work for employed people were:

- Car - as driver 66.0%, as passenger 5.3%



- Train - 3.0%;
- Bus - 2.1%;
- Worked from home - 3.4%.

On the day of the census 9.5% of employed people used public transport (train, bus, ferry, tram/light rail) as at least one of their methods of travel to work and 74.5% used car (either as driver or as passenger). Of occupied private dwellings in Wanneroo 89.3% were separate houses, 10.2% were semi-detached, row or terrace houses, townhouses, 0.2% were flat or apartments and 0.3% were other dwellings.

CITY OF WANNEROO		
Country of Birth - Top 10 overseas birthplaces		
Enumerated data	number	%
United Kingdom	29,478	15.7
New Zealand	7,086	3.8
South Africa	5,952	3.2
Vietnam	3,356	1.8
India	3,220	1.7
Philippines	2,144	1.1
Ireland	1,554	0.8
Zimbabwe	1,477	0.8
Myanmar (Burma)	1,313	0.7
Malaysia	1,235	0.7
Speaks English Only	139,275	74.0
Speaks another language, and English well or very well	32,173	17.1
Speaks another language , and English not well or not at all	6,275	3.3
Not Stated	10,507	5.6
<b>Total Population</b>	<b>188,230</b>	<b>100.0</b>

*Table 3: Australian Bureau of Statistics, Census of Population and Housing for City of Wanneroo*

Suburb	0 - 4	5 - 11	12 - 17	18 - 24	25 - 34	35 - 49	50 - 59	60 - 69	70 - 84	85+	Total
Alexander Heights	478	770	658	836	1,019	1,609	1,294	719	479	64	<b>7,926</b>
Alkimos	713	706	401	673	1,604	1,370	469	222	98	3	<b>6,259</b>
Ashby	239	243	148	206	413	564	255	215	338	45	<b>2,666</b>
Banksia Grove	1,059	1,115	761	966	2,323	2,002	690	314	102	12	<b>9,344</b>
Butler	1,251	1,686	1,353	1,373	2,272	3,197	1,082	625	416	48	<b>13,303</b>
Carramar	489	896	739	681	853	1,773	904	514	266	18	<b>7,133</b>
Clarkson	1,107	1,271	944	1,521	2,607	2,896	1,388	796	417	18	<b>12,965</b>
Darch	565	898	845	630	850	1,969	710	370	270	4	<b>7,111</b>
Eglinton	190	180	113	218	473	330	95	51	25	0	<b>1,675</b>

Girrawheen	658	891	656	848	1,412	1,771	940	868	617	51	<b>8,712</b>
Gnangara Jandabup Mariginiup	77	162	199	214	198	338	429	371	227	26	<b>2,241</b>
Hocking	542	721	448	486	914	1,508	621	438	229	21	<b>5,928</b>
Jindalee	201	259	273	261	355	629	333	151	54	0	<b>2,516</b>
Koondoola	317	449	315	429	588	784	442	397	291	26	<b>4,038</b>
Landsdale	1,041	1,285	1,123	1,215	2,174	2,864	1,430	684	375	23	<b>12,214</b>
Madeley Wangara Woodvale	453	693	434	492	871	1,506	660	572	508	138	<b>6,327</b>
Marangaro o	662	947	862	1,077	1,451	2,199	1,357	1,030	747	213	<b>10,545</b>
Merriwa	423	533	434	460	775	964	500	373	732	300	<b>5,494</b>
Mindarie Tamala Park	267	734	884	751	422	1,830	1,289	651	563	109	<b>7,500</b>
Neerabup Pinjar Nowergup Carabooda	40	70	66	87	68	192	145	92	56	3	<b>819</b>
Pearsall	306	384	242	399	795	868	403	304	124	9	<b>3,834</b>
Quinns Rocks	540	1,008	932	815	913	2,249	1,185	639	351	60	<b>8,692</b>
Ridgewood	411	525	405	472	685	973	406	309	402	51	<b>4,639</b>
Sinagra	311	284	154	234	621	576	231	144	80	19	<b>2,654</b>
Tapping	821	1,325	888	785	1,332	2,485	874	525	360	32	<b>9,427</b>
Two Rocks	216	317	208	205	377	614	400	342	279	21	<b>2,979</b>
Wanneroo	782	968	749	1,066	1,725	2,265	1,537	1,417	1,126	340	<b>11,975</b>
Yanchep	804	1,041	663	685	1,361	1,929	933	723	620	133	<b>8,892</b>
<b>Total</b>	<b>14,986</b>	<b>20,397</b>	<b>15,932</b>	<b>18,129</b>	<b>29,469</b>	<b>42,224</b>	<b>21,073</b>	<b>13,903</b>	<b>10,215</b>	<b>1,892</b>	<b>188,220</b>

*Table 4: Suburb Population Statistics by Age Groups (from 2016 Census)*

<b>Year</b>	<b>Urban Land (ha)</b>	<b>Rural Land (ha)</b>	<b>Population</b>
2000	3,800	19,800	76,000
2010	6,300	17,300	152,746
2021	9,200	14,400	236,844
2031	11,600	12,400	325,470
2050	16,100	7,900	536,767
Full development (approximately 2070)	18,100	5,900	614,500

*Table 5: Changes in Urban and Rural land over time showing corresponding population growth*

Further development within the City of Wanneroo will pose its challenges for the BRM Plan and its timeframe. The City will require the Plan to be reviewed and updated six monthly due to the rapid development.

The City has approved subdivisions across the majority of Wanneroo, although there is still no development in some areas and will therefore need to be monitored and the BRM Plan updated accordingly.

The City of Wanneroo has both urban and rural communities which present different challenges relating to bushfire management and education. The rapid growth on the urban fringe has resulted in an increase of residents close to bushfire risk who often have limited understanding and experience with bushfires. There is a varying level of understanding and preparedness in the rural areas over all this is not fully understood. The City's Community Safety and Emergency Management Team are taking measures to engage with the community by providing educational information via the web-site, brochures and engagement via the Volunteer Bush Fire Brigades. The City also directs its residents to the Department of Fire and Emergency Services website.

#### **3.1.4 Economic Activities and Industry**

There are many tourist attractions and major features in the City of Wanneroo. Tourism increases the complexity of communication in the event of a bushfire. Particularly in areas such as Yanchep and Neerabup National Parks where bush walking and camping is the activity of choice in these national parks, with the peak season for this activity being from October through to May. This peak season is not only in the Bushfire Season but also the start of the season for mitigation works that include the use of prescribed burning.

Barbagallo Raceway and Motocross Clubs see large crowds of people in one place from both intrastate and interstate. Many of the events run over a period of time and see people camping in the State Forest adjacent to the raceways posing a risk with camp fires and cooking activities. These events typically see flammable materials on site in large quantities and high value mobile structures including race cars and motorbikes that are onsite and will see personnel putting themselves at risk in the event of a wildfire to save such items.

A number of private tourism businesses operate across the City with some located within the more rural areas. There are several heritage sites including the Neerabup Walk Trail, Perry's Paddock and the 10th Light Horse Heritage Trail. Although not necessarily legally sanctioned, many of the bushland areas are regularly used by recreational four wheel drivers and trail bike riders. A portion of the Gnangara and Pinjar Pine Plantations are allocated to trail bike users and maintained by the Department of Biodiversity Conservation and Attractions (DBCA).

Local industries include market gardening and other agricultural activities, limestone and sand quarries and commercial fishing. A broad range of businesses and industries operate out of the industrial hubs of Wangara, Lansdale, Clarkson and Neerabup.

Rural areas of Wanneroo consist of a large number of market gardens. These market gardens are established on large areas of land and by their construction and design are less likely to be impacted by bushfire as they have irrigation, firebreaks and are predominantly planted with vegetables and other vegetation that is not considered to be as high bushfire prone as native vegetation.

The first vegetable gardens established in Wanneroo intensified with an influx of Southern European migrants to the district. At the time, the market gardens were set up on the banks of the district's lakes such as Nowergup, Neerabup, Goollelal and Joondalup Lakes. The lake system proved ideal for agricultural purposes as the lakes receded in summer and exposed rich soils. When irrigation systems were introduced, market gardens relocated from the lake's edge to the higher sandy flats. A wide variety of foodstuffs are grown with different ethnic groups specialising in different techniques and crops, such as tomato crops, potatoes, pumpkins, carrots, cabbages, cauliflower, strawberries and grapes. New farming techniques and machinery have meant many changes to the planting and cultivation of market gardens over the years. Today the horticulture industry in Wanneroo is worth over \$100 million a year.

During the years of the district's massive growth, plant and flower nurseries were introduced to cater for the lucrative florist and home garden markets.

The closure of major transport routes during a bushfire would have negative impacts on economic industries operating in or accessing transport infrastructure within the City.

Development is a major industry in the City of Wanneroo. The City has been engaged in identifying established sub-division developments affected by previous planning decisions which are no longer in line with modern bushfire risk management principles. All established and planned residential sub-divisions are provided with two way access and egress routes to reduce the bushfire risk.

The City of Wanneroo has undertaken considerable work to reduce the impacts of bushfire on the community. This has included significant planning, including the establishment of two way access and egress routes, firebreak notice compliance and enforcement, public education, community engagement, bushfire risk management planning and fuel reduction work.

### **3.2 Description of the Environment and Bushfire Context**

#### **3.2.1 Topography and Landscape Features**

The City of Wanneroo has many landscape features including a chain of linear wetlands, a chain of circular wetlands and subterranean wetlands. The wetlands add complexity in fire suppression due to acid sulphate soils (ASS) that occur naturally in the City but are harmless when left in a waterlogged, undisturbed environment. However when exposed to air through drainage or excavation the iron sulphides in the soils react with oxygen and water to produce iron compounds and sulphuric acid. This acid can release other substances including heavy metals from the soil and into the surrounding environment and waterways. Activities like tracking fires and installing fire breaks poses the potential to disturb ASS causing serious environmental harm. The lakes see biomass fuels and thick fuels like tree branches or logs and organic soils like the duff layer or peat causing smouldering combustion.

Smouldering combustion is the slow, low temperature, flameless burning of porous fuels. Peat soils are made by the natural accumulation of partially decayed biomass and are the largest reserves of terrestrial organic carbon. Because of this vast accumulation of fuel, once ignited, smouldering peat fires burn for very long periods of time (months, years) despite extensive rains, weather changes or firefighting attempts. Indeed, smouldering is the dominant combustion phenomena in mega-fires of peat lakes and which are almost

impossible to extinguish. The only method of extinguishing the fire is to re-establish the natural water levels of the area. There have been multiple fires in the City of Wanneroo in peat lakes that have burnt for long periods of time. These fires add complications on environmental impacts, health effects to the public and nearby residents, cost and consequences of leaving the fire to burn, social and environmental cost factors which can vary from lost productivity of the fire and emergency services and ongoing response calls, to the relocation of residents.

The City, in conjunction with the Department of Fire and Emergency Services (DFES) and the Department of Biodiversity, Conservation and Attractions (DBCA) identified a total of 1,107 properties within the City as containing peat (organic and acid sulphate) soil. Administration has engaged with these property owners to advise of the statutory requirements to install firebreaks, but to also plan around water access and supply. A guide on preventing and suppressing bushfires on organic and acid sulphate soils has also been provided to the landowners.

The map below illustrates the extent of these acid sulphate soils along with their relative associated risk levels. If disturbed and left unmanaged, they can present potential risks to groundwater and even human health.

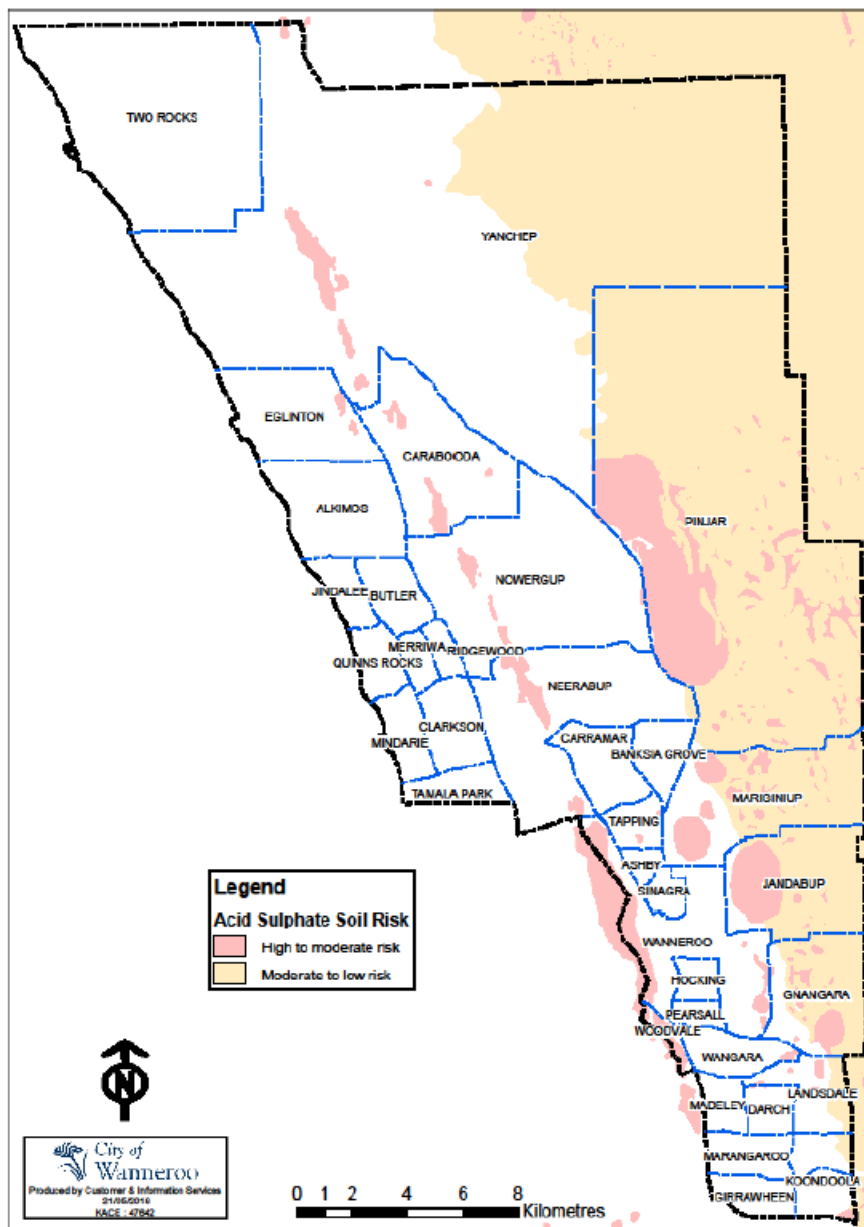


Figure 5: Acid Sulphate Soils ( City of Wanneroo)

Karst features are a key environmental characteristic in the City of Wanneroo due to the distribution of Tamala limestone. Weathering of Tamala results in a number of landform features. In the City of Wanneroo the main karstic feature is the caves from the north of Wanneroo as far south as Neerabup. These Caves provide extensive slopes increasing rates of spread of wild fire, inaccessible terrain in wildfire situations making suppression dangerous for frontline firefighting crews. Hazards include unstable grounds, large holes, sharp rocks, line of sight and communication connection issues due to the limestone outcrop.

The City of Wanneroo manages 32 kilometres of coastline with residential areas among dunes in areas like Alkimos, Eglinton, Jindalee, Two Rocks and Yanchep. The coastal areas in Wanneroo have very few access tracks making fire suppression very difficult. Due to the ongoing unpermitted use of off road vehicles in Wanneroo and the ongoing developments in

the northern ward, any access tracks typically get blocked by fences, sand, rubble, rocks and excavations. Coastal fuels see very high rates of spread and fire intensity in the summer months. Mitigation works become difficult in Coastal areas due to negative environmental and sociological impacts.

### **Groundwater**

An important groundwater resource in the City is the Gnangara Mound, which is one of the main sources of public and private water supply in the metropolitan region and is protected by State Planning Policy. This good quality groundwater is generally unconfined, fresh and easily accessible, usually at depths of up to 50 metres below the surface (Water and Rivers Commission, 2004). The fundamental groundwater issues facing the City include:

- Groundwater levels and groundwater availability to a range of users and economic activities (e.g. horticulture, market gardening);
- Current over-allocation of groundwater;
- Ongoing protection of groundwater quality and protection from contamination; and
- Optimising beneficial recharge of treated waste water and surface-runoff to the groundwater body.

Through the Water Conservation Plan, the City aims to reduce its impact on the water table as a result of extraction for watering of parks. The Local Environmental Strategy looks to expand on the efficiency of groundwater protection through responses that focus on groundwater use, water sensitive urban design, and the City's water future as a whole. The Strategy will also look at how to maximise the use of water in its agricultural areas so that groundwater can be preserved and the City's important agricultural precincts can be preserved.

### **Surface Water – Wetlands**

The City has a range of wetland ecosystems such as permanently inundated lakes, seasonally inundated swamps and seasonally waterlogged damplands. These wetlands provide important habitat for a diversity of fauna, including an extensive number of water bird species. The City's wetlands are divided into 3 management categories which denote their relative conservation values.

The City undertakes monitoring of some of its wetlands to ensure that they remain healthy. In addition, the City provides guidance on planning proposals that could have the potential to impact on wetlands through Local Planning Policy 4.1: Wetlands. The City looks to improve the quality of its wetlands through the implementation of the LES by pursuing innovative surface water improvement initiatives.

### **Coastline**

The City's coast stretches 32 kilometres from Tamala Park in the south, to Two Rocks in the north. Wanneroo's coastal foreshore is relatively undeveloped, especially when compared to the coastline further south. The City's ocean coastline is an extraordinary natural asset for the City and has been an important stimulus to the urban growth of the coastal corridor.

The City's coast also contains important regional conservation values and extensive ecological linkages characterised by coastal limestone cliffs and coastal heathland vegetation. The coastline also represents sand dune formations occurring as beach ridges and a variety of dune types. Virtually the entire coastal foreshore is contained in reserves for

Parks and Recreation in the Metropolitan Region Scheme, and DPS2, as well as a majority being designated 'Bush Forever' (Bush Forever is a whole-of-government policy for the conservation of regionally significant bushland on the Swan Coastal Plain portion of the Perth Metropolitan Region).

### 3.2.2 Climate and Bushfire Season

The City experiences a Mediterranean climate with cool wet winters and warm dry summers. According to the Bureau of Meteorology (Perth Airport, Station ID 009021, 2017) the average rainfall is 771.6 mm per annum, with the majority falling between May and August. The average maximum temperature in Wanneroo ranges from 17.9 °C in winter to 31.9 °C in summer, with the highest recorded maximum being 46.7 °C. The average minimum temperatures range from 8.0°C in winter to 17.5 °C in summer, with the lowest recorded minimum being -1.3 °C. The predominant wind directions include morning easterlies and westerly sea breezes during summer months, with an average wind speed of 23.8 km/h and gusts of more than 100 km/h.

This rainfall supports substantial vegetation growth during the winter and spring months which dries during spring and into summer creating excessive fuel loads. The combination of prevailing winds during the warmer months and desiccated vegetation increases bushfire risk.

Weather influences fire occurrences and behaviour in Wanneroo through lightning strikes and winds contributing to rates of fire spread and ember and firebrand movement. Due to the City of Wanneroo having little canopy cover over ground fuels and sand based lands, the moisture content is affected in a short period of time over high temperatures through the day increasing the curing times.

The following tables reflect the average climatic conditions for the City of Wanneroo since records commenced. Weather statistics are taken from the Bureau of Meteorology.

Statistic Element	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Annual	Start	End
Mean Max Temp (°C)	31.2	31.6	29.6	25.9	22.3	19.4	18.4	19	20.3	23.4	26.7	29.1	24.7	1994	2018
Highest Temp (°C)	44.4	44.5	42.4	37.3	34.3	26.2	25.8	27.2	34.2	37.2	40.3	44.2	44.5	1994	2018
Decile 9 Max (°C)	37.5	37.5	35.4	30.8	26.3	22.4	21	22.1	24.4	29	33.4	36.5		1994	2018
Mean Min Temp (°C)	18.1	18.5	16.7	13.8	10.5	8.5	7.8	8.3	9.5	11.6	14.3	16.3	12.8	1994	2018
Lowest Temp (°C)	8.9	9.9	6.3	4.7	1.3	-0.7	0	1.3	1	2.2	5	7.9	-0.7	1994	2018
Highest Temp (°C)	29.7	27.7	28.1	23.4	19.2	16.3	16.5	17.1	18.2	21.3	24.4	27.3	29.7	1994	2018
Decile 9 Min Temp (°C)	22	22	20.8	18	15	13.1	12.7	13	13.6	15.7	17.9	20.2		1994	2018
Mean Rainfall (mm)	20.2	13.1	19.7	35.7	89.4	124.5	145.9	126	84.8	38.8	21.8	10.9	733.2	1994	2018
Decile 9 Monthly Rainfall (mm)	47.1	25.6	53	72.8	138.4	193.6	196.7	167.4	112.2	59.6	44.4	20.4	869.2	1994	2018
Mean 9am Temp (°C)	23.8	23.7	21.8	19	15.8	12.8	11.9	12.9	15.2	17.7	20.8	22.6	18.2	1994	2010
Mean 9am Relative Humidity (%)	51	53	57	64	72	78	80	75	67	58	52	50	63	1994	2010
Mean 9am Wind Speed km per hr	13.9	14	13	10.4	9.6	9.6	9.7	10.6	12.4	13.6	13.8	13.9	12	1994	2010
Mean 3pm Temp (°C)	29	29.5	27.9	24.3	21.4	18.2	17.2	17.7	18.7	21.3	24.2	26.8	23	1994	2011
Mean 3pm Relative	39	38	40	46	50	56	57	54	53	47	44	41	47	1994	2011



Humidity (%)																
Mean 3pm Wind Speed km per	19	17.9	15.9	14.3	12.5	13	13.3	14.3	16.6	18.1	18.7	19.1	16.1	1994	2011	

*Table 6: Bureau of Meteorology Climate Data for Perth Metropolitan Area (1993 – 2018)*

Statistic Element	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Start	End
Mean Max Temp (°C)	33.5	33.3	30.6	26.4	22	18.9	17.9	18.4	20.1	23.5	27.4	30.4	25.2	1940	2018
Highest Temp (°C)	46	45.7	42.9	39.4	35.4	27.2	29.6	29.6	33	38	41.6	44.2	46	1940	2018
Decile 9 Max (°C)	40.2	39.6	36.4	32.1	26.4	22.3	20.7	21.7	24.2	29.3	34.5	37.6		1940	2018
Mean Min Temp (°C)	17	17.6	16	13.3	10.7	9.3	8.4	8.2	8.8	10.2	12.6	14.5	12.2	1940	2018
Lowest Temp (°C)	7.4	6.8	4.5	2	-0.6	-2.9	-1.9	0.5	0.5	1.2	2.8	5.3	-2.9	1940	2018
Highest Temp (°C)	31.2	29.1	28.1	24.2	22	17.4	16	16.3	19.1	23.4	26.2	28	31.2	1940	2018
Decile 9 Min Temp (°C)	22	22.5	21	18.5	15.4	13.3	12.3	12.2	12.7	14.5	17	19.6		1940	2018
Mean Rainfall (mm)	10.7	13.2	16.7	34.5	83.9	130	134.4	106.2	68.8	36	22.5	11.1	655.1	1937	2018
Decile 9 Monthly Rainfall (mm)	27.6	33.6	39.4	66.9	137.1	205.1	198.2	141.9	103.9	61.6	55.1	35	789	1937	2018
Mean 9am Temp (°C)	24.1	24	21.8	18.9	15.6	13.2	12.1	12.7	14.6	17.3	20.5	22.6	18.1	1940	2011
Mean 9am Relative Humidity (%)	48	50	56	64	72	78	79	76	71	61	53	48	63	1944	2011
Mean 9am Wind Speed km per hr	17.9	17.8	16.3	13.3	11	11.2	10.5	11.3	1.3	14.9	16.7	16.7	14.2	1940	2011
Mean 3pm Temp (°C)	31.4	31.5	28.7	24.8	20.9	17.7	16.6	17.2	18.9	22.1	25.5	28.4	23.6	1940	2011
Mean 3pm Relative Humidity (%)	30	31	35	43	50	60	61	57	54	46	39	33	45	1944	2011
Mean 3pm Wind Speed km per	20.4	19	17.8	15.8	13.9	15.3	15.5	16.6	17.7	18.5	20.5	21.1	17.7	1940	2011

*Table 7: Bureau of Meteorology Climate Data for Pearce (1937 – 2018)*

The below images represents the mean wind directions at 9:00am and 3:00pm for both Perth Metro and Pearce. These depictions clearly indicate that the predominant wind patterns are easterly in the morning tending to swing to south westerly in the late morning/early afternoon.

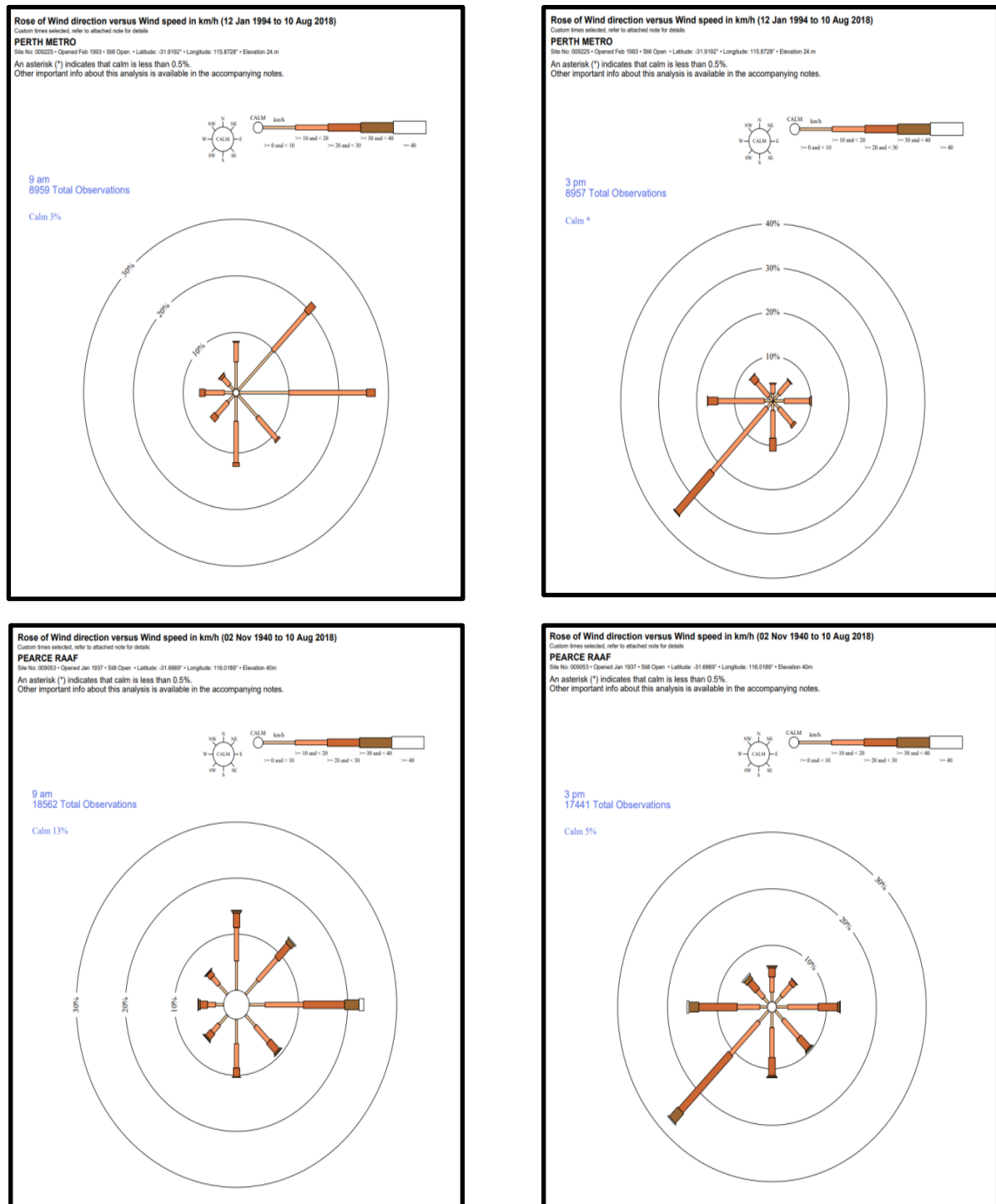


Figure 6: Perth Metro and RAAF Pearce Mean Wind Direction vs Wind Speed (km/h)

The City has similar conditions to Pearce and Perth Airport, therefore based on research, it has been determined that Severe FDR's are reached on average approximately 2 to 3 times per year.

The bushfire season in Wanneroo is generally considered to be from November through to April. The City has restricted, unrestricted burning times and a prohibited burning period as follows:

Restricted Burning Period	1 April until 31 May annually (permits required)
Unrestricted Burning Period	1 June until 31 August annually
Restricted Burning Period	1 September until 30 November annually (permits required)
Prohibited Burning Period	1 December until 31 March

*Table 8: Restricted, Unrestricted and Prohibited Burning Times*

These dates can be varied based on seasonal climatic variables and weather conditions including periods where lack of winter rainfall may constitute drought conditions. Irregular summer storms emanating mostly from tropical cyclones in the north of the state may produce lightning and high winds in the outer metropolitan area. This increases the potential risk of wildfires and erratic fire behaviour in the City of Wanneroo. With a high population in the City of Wanneroo and areas of vacant land around subdivisions a large contribution of wildfire comes from human error and arson attack. The City of Wanneroo has seen arson attacks across the local government district with Yanchep being attacked heavily between 2015 -2018. The City's Community and Safety Team deploy covert cameras in the affected areas. Rangers and Wanneroo Fire Services also conduct regular patrols during the period of arson attacks.

### 3.2.3 Vegetation

The City features a range of distinctive geomorphic landforms that run in a north south direction roughly parallel to the coastline, each displaying different topography and soil characteristics. These landforms contribute to distinct landscapes, varied native vegetation types and distinct "sense of place".

The City is located on the Swan Coastal Plain, which comprises fifteen vegetation complexes. Of these fifteen vegetation complexes, twelve are mapped within the City of Wanneroo (Figure 7). The City of Wanneroo contains the only occurrences of the Pinjar Complex in the bioregion and Karrakatta Complex – North in the Perth metropolitan region. It also contains a significant portion of the Karrakatta Complex – Central and South, which is in steep decline across the Swan Coastal Plain.

The 32km of coastline running from the south of Mindarie to as far north as Two Rocks is home to the "Quindalup Complex". This coastal heath vegetation provides very high rates of spread and proves difficult in suppression activities from October through to April. The Quindalup Complex is very complicated regarding treatment methods due to environmental, ecological and sociological considerations and limitations.

**Table 8** prescribes a priority level for each vegetation complex within the City of Wanneroo in accordance with the objectives for biodiversity conservation as set out in The National

Objectives and Targets for Biodiversity Conservation 2001 – 2005. These priorities have been assigned based on the regional and local representation of the vegetation complex and it's the level of protection within the City of Wanneroo. Priorities range from Critical to Low.

Vegetation Complex	Percentage of pre-European Extent Remaining in the Swan Coastal Plain	Percentage of pre-European Extent Remaining in the City of Wanneroo	Percentage of pre-European Extent Protected in the City of Wanneroo	Priority
Bassendean Central and South	27.7	16.3	12.4	High – Critical
Bassendean Central and South Transition	97.7	99.6	99.6	Low
Bassendean North	72.2	51.4	50	Low
Bassendean North Transition	91.4	67	61.9	Low
Cottesloe Central and South	35.2	32.4	17.5	High
Cottesloe North	69	66	60.6	Low
Karrakatta Central and South	23.9	10.9	5.6	Critical
Karrakatta North	37.7	21.2	18	High
Karrakatta North Transition	88.8	79.5	79.1	Low
Quindalup	55.4	25.3	11.3	High
Herdsmen	34.6	41.2	28.6	High
Pinjar	30.1	30.1	16.3	Critical

#### Legend

Critical	Less than 30% of original extent remaining regionally; Less than 10% of original extent remaining locally; Less than 10% Protected. Endemic to the City of Wanneroo
High	Greater than 30% of original extent remaining regionally; Less than 30% of original extent remaining locally; Less than 30% Protected.
Medium	Greater than 30% of original extent remaining regionally; Adequately represented locally; Less than 30% Protected.
Low	Adequately represented regionally; Adequately represented locally; Adequately Protected.

*Table 9: Restricted, Unrestricted and Prohibited Burning Times*



Figure 7 illustrates the vegetation complexes within the City of Wanneroo.

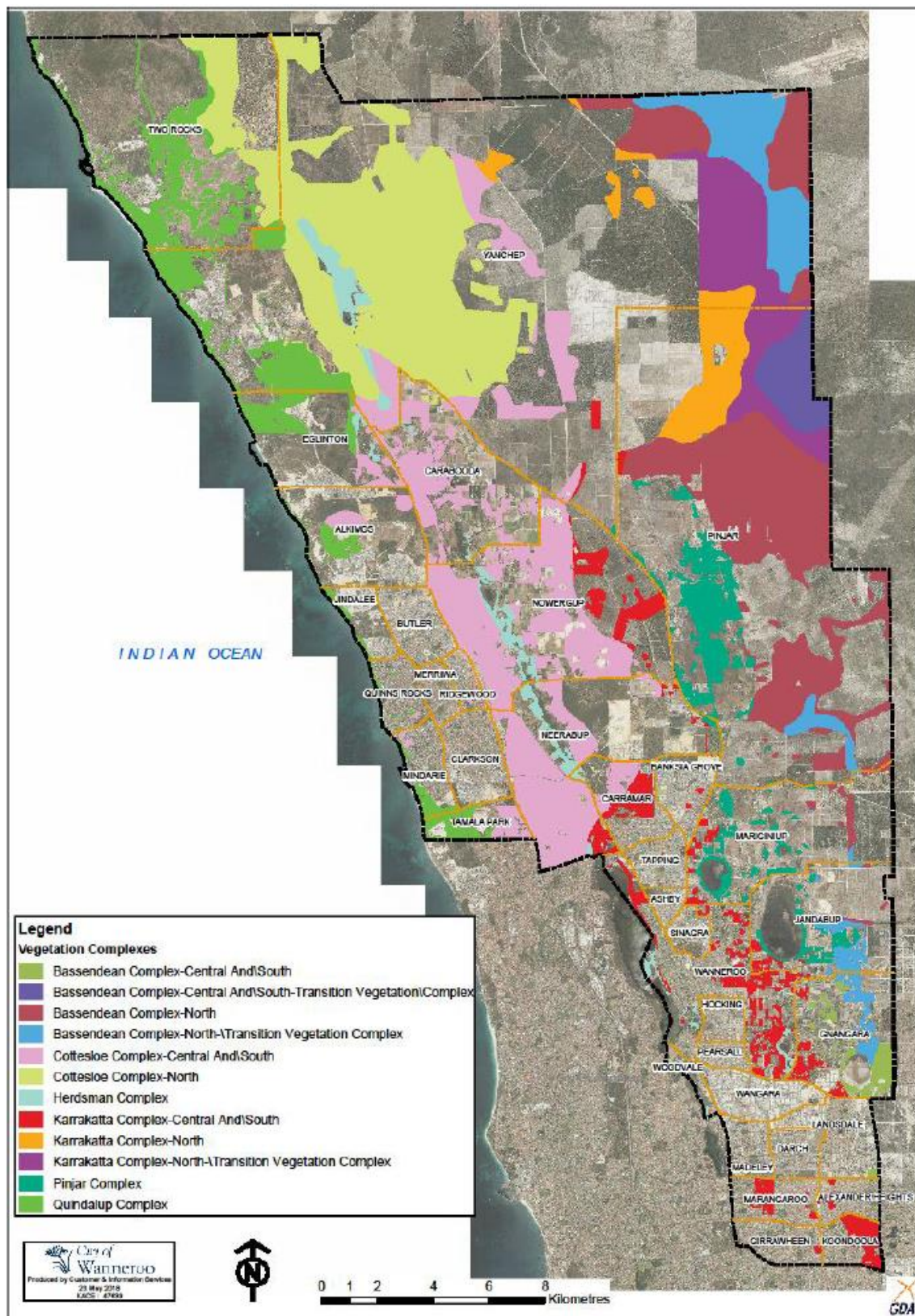


Figure 7: Vegetation Complexes (City of Wanneroo)

### 3.2.4 Bushfire Frequency and Causes of Ignition

The City of Wanneroo has 4 active brigades, these being Wanneroo Central, Quinns Rocks, Two Rocks and Wanneroo Fire Support. Between 2014 and October 2018 Wanneroo Central turned out to 859 calls, Quinns Rocks turned out to 758 calls, Two Rocks turned out to 483 and Wanneroo Fire Support turned out to 208 calls. The peak time for all fire calls between 2014 and 2018 have been between 12:00pm and 6:00pm with the majority of calls being received at 3.00pm.

Primary ignitions are human related being arson, stolen vehicles, vehicle accidents and accidental causes such as lost hazard reduction burns. Another significant ignition source is summer storms containing dry lightning cells.

The City has several areas of acid sulphate/peat soils in former lake systems that cause concern when a wildfire impacts the area.

Peat fires are unique and require a specialised approach. Recent level 1 peat fire ignited in Neerabup and was of a complex nature due to the amount of peat which proved to be very difficult to contain to the area. The area was very dry, resistant to water and was two to three metres deep with the peat burning below the surface and could not be readily detected. Containment and ongoing extinguishment was supported by Wanneroo Bush Fire Brigades, assistance from other local governments and the Department for Biodiversity, Conservation and Attractions to provide additional fire fighters and equipment.

There have been previous Peat fires within the City of Wanneroo, namely in 2004 and 2014. Corrective actions have now been implemented to assist the City to be better prepared for future peat fire ignitions. Some strategies developed are as follows:

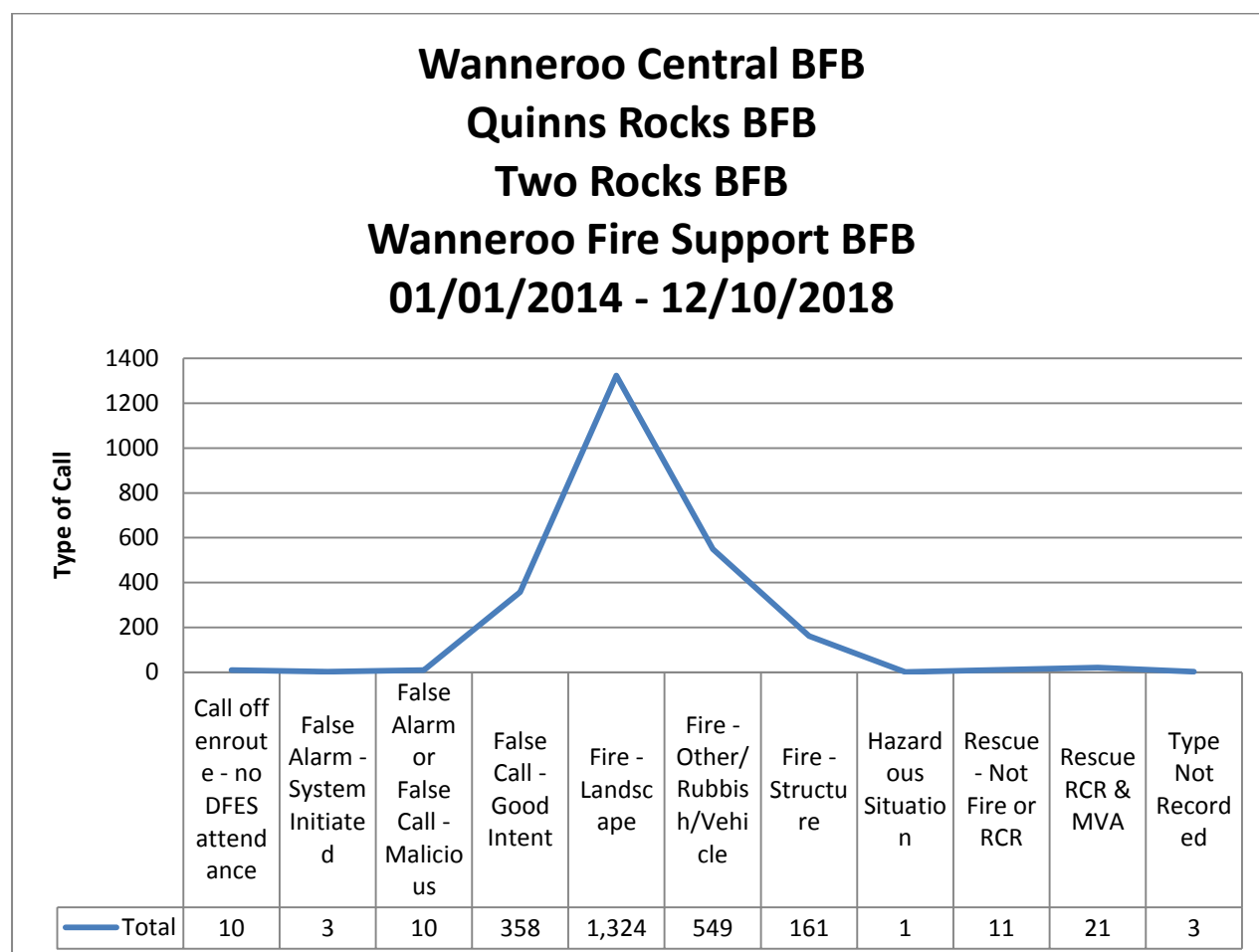
- Map all potential areas where peat soil is located;
- Identify locations of water supplies;
- Develop initial Response Plans and Fire Action Plans for each identified area;
- Consult with the Department of Water and Environmental Regulation (DWER) in the development of the business plan and resulting peat fire policy and procedure;
- Ensure land owners of properties that have been identified as potentially containing peat (organic and acid sulphate) soil, have installed firebreaks as per City requirements. This will assist firefighters to suppress any fire as quickly as possible to safeguard residents and mitigate the risk to the firefighting crews.

The Koondoola fire in 2011 highlighted the need to undertake a combination of strategies to provide effective outcomes such as controlled hazard reduction burning, mulching, weeding and spraying. The reserve had been well maintained with limestone tracks installed with a weed and spraying program undertaken in previous years, however still managed to burn through 62.66 hectares of the 135 hectare reserve. The combined fire-fighting cost to extinguish this fire was estimated at \$1.2 million.

In 2014 Celladon Park was subject to a deliberate arson attack with multiple ignition points, however due to a hazard reduction burn conducted in the previous year, this helped decrease fire intensity and fire-fighters were able to contain and control the fire quickly which also assisted in reducing the damage to the reserve.

The most recent significant fire was the 2015 Bullsbrook/Wanneroo Fire, while the highest risk areas of significant bushfire impacting on human habitations would be in the suburbs of Two Rocks, Yanchep, Carabooda, Mariginiup, Nowergup and Neerabup.

DFES records indicate the City's four Volunteer Bush Fire Brigades were activated from 1 January 2014 to 12 October 2018 as follows:



*Figure 8: City of Wanneroo Volunteer Bush Fire Brigades Activations*



**All Landscape Fires**  
LGA of WANNEROO (C)  
from 01/07/2007 to 30/06/2018

**Bushfires Summary of Ignition**

	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Total
<b>Total Number of Bushfires:</b>	<b>470</b>	<b>535</b>	<b>484</b>	<b>528</b>	<b>435</b>	<b>391</b>	<b>322</b>	<b>354</b>	<b>328</b>	<b>266</b>	<b>201</b>	<b>4,314</b>
Burn off fires	5	5	4	5	5	9	6	5	10	9	6	69
Campfires/bonfires/outdoor cooking	2	2	2	1	0	4	4	1	0	6	7	29
Children misadventure	7	12	15	8	1	4	1	1	3	3	3	58
Cigarette	55	74	102	72	90	62	69	43	92	67	48	774
Electrical distribution (excl. power lines)	1	5	4	0	0	2	2	0	0	0	1	15
Equipment - Mechanical or electrical fault	0	0	0	0	0	0	1	1	0	0	1	3
Equipment - Operational deficiency	0	0	1	0	0	0	2	1	1	0	0	5
Fireworks/flares	0	0	1	1	0	3	0	2	1	0	1	9
Heat from other hot objects or friction	0	0	0	0	0	1	0	0	0	0	0	1
Hot works (grinding, cutting, drilling etc..)	2	0	1	2	2	1	3	2	1	1	0	15
Human Error (Left on, knock over, unattended etc.)	0	5	7	0	0	1	1	3	1	1	1	20
Improper Fuelling/Cleaning/Storage/Use of material ignited	4	3	5	8	1	4	1	6	2	4	3	41
Indoor Appliances - cause unknown	0	0	0	0	0	1	0	0	0	0	0	1

	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Total
Other open flames or fire	32	25	27	24	19	11	12	16	5	8	4	183
Power lines	0	0	3	3	3	3	4	5	0	4	1	26
Reignition of previous fire	19	17	25	24	19	11	10	16	19	6	5	171
Sleeping/Alcohol/Drugs/Physical-Mental impairment	1	2	0	3	1	1	1	1	2	2	4	18
Suspicious/Deliberate	277	293	215	269	199	226	170	183	146	120	96	2,194
Undetermined	29	26	20	40	40	24	16	14	4	6	7	226
Unreported	32	53	44	60	50	9	9	34	21	20	7	339
Vehicles (incl. Farming Equipment/Activities)	2	2	2	2	2	1	2	7	3	1	2	26
Weather Conditions - Lightning	0	1	3	1	0	5	5	10	1	5	1	32
Weather Conditions (High winds, natural combustion etc. Excludes Lightning)	2	10	3	5	3	8	3	3	16	3	3	59

*Table 10: All Landscape Fire – 01/07/2007 – 03/06/2018 (City of Wanneroo)*

### 3.2.5 Firebreak Notice – Existing Works

The Firebreak Notice is reviewed yearly to ensure it is kept up to date with contemporary bushfire management practices including measures provided by the Western Australian Planning Commission's Guidelines for Planning in Bushfire Prone Areas and Appendices and AS3959-2009 Construction of Buildings in Bushfire Prone Areas. The current Firebreak Notice includes installing a 3 metre wide bare earth cleared fire break as close as possible to all external boundaries of the property. Firebreaks must be installed by 1 November each year and maintained until 30 April the following year, where it is not possible to install the firebreak adjacent to the external boundary of the property due to naturally occurring obstacles, it is acceptable to install the firebreak around the obstacle. If this variation requires the firebreak to be greater than 5 metres away from the external boundary, a firebreak variation is required. A minimum vertical clearance of 3.5 metres must also be



maintained along the fire breaks to ensure vehicles can drive along the firebreaks without being impeded by tree branches. The Installation of and maintenance of a 20 metre building protection zone surrounding all buildings, large hay stacks and fuel storage areas is required. A building protection zone includes undertaking measures such as pruning all lower tree branches to prevent fire entering the trees, ensuring 3 metre spacing between tree canopies to prevent treetop fires spreading between trees, keeping all grasses to a height of not more than 50 millimetres and storing all firewood piles more than 20 metres away from the buildings. The City will not enforce existing homes to retrospectively adopt all State Planning Policy 3.7 measures.

The implementation of State Planning Policy 3.7, Planning in Bushfire Prone Areas, through information provided within the Guidelines and Appendices for new constructions will help to ensure:

- Decision makers determine appropriate land use planning in relation to bushfire prone areas;
- Specification of requirements to be met at each stage of the planning process; and
- Necessary bushfire protection measures are incorporated into development.

## 4. Asset Identification and Risk Assessment

### 4.1 Planning Areas

The City of Wanneroo has been divided into three planning areas, these being Pinjar, Wanneroo Coastal and Wanneroo. A map showing the boundaries of the planning areas identified within the City of Wanneroo is attached at *Appendix 2*.

#### 4.1.1 Priorities for Asset Identification and Assessment

Assets were identified and assessed across the local government area, based on the following order of priority.

Priority	Asset Category	Asset Subcategory	Planning Area
<b>First Priority</b>	Human Settlement	Special Risk and Critical Facilities	All
<b>Second Priority</b>	Human Settlement	All other subcategories	All
<b>Third Priority</b>	Economic	Critical Infrastructure	All
<b>Fourth Priority</b>	Economic	All other subcategories	All
<b>Fifth Priority</b>	Environmental	All subcategories	All
<b>Sixth Priority</b>	Cultural	All subcategories	All

*Table 11: Priorities for Asset Identification and Assessment*

The *Planning Area Assessment Tool* was applied to each planning area to determine the priorities for asset identification and assessment. Using the tool, each planning area was rated against six risk factors, with the highest scoring planning area being the first priority for asset identification and risk assessment.

Assets were identified and assessed in each planning area, based on the results of the planning area assessment outlined in the following table.

## 4.2 Asset Identification

Asset identification and risk assessment has been conducted at the local level using the methodology described in the *Guidelines*. Identified assets have been mapped, recorded and assessed in the Bushfire Risk Management System (BRMS). Identified assets are categorised into the following subcategories:

Asset Category	Asset Subcategories
<b>Human Settlement</b>	<ul style="list-style-type: none"> <li>• <b>Residential areas</b> Rural urban interface areas and rural properties.</li> <li>• <b>Places of temporary occupation</b> Commercial, mining and industrial areas located away from towns and population centres (that is, not adjoining residential areas).</li> <li>• <b>Special risk and critical facilities</b> Hospitals, nursing homes, schools and childcare facilities, tourist accommodation and facilities, prison and detention centres, government administration centres and depots, incident control centres, designated evacuation centres, police, fire and emergency services.</li> </ul>
<b>Economic</b>	<ul style="list-style-type: none"> <li>• <b>Agricultural</b> Pasture, grazing, livestock, crops, viticulture, horticulture and other farming infrastructure.</li> <li>• <b>Commercial and industrial</b> Major industry, waste treatment plants, mines, mills and processing and manufacturing facilities and cottage industry.</li> <li>• <b>Critical infrastructure</b> Power lines and substations, water and gas pipelines, telecommunications infrastructure, railways, bridges, port facilities and waste water treatments plants.</li> <li>• <b>Tourist and recreational</b> Tourist attractions and recreational sites that generate significant tourism and/or employment within the local area.</li> <li>• <b>Commercial forests and plantations</b></li> <li>• <b>Drinking water catchments</b></li> </ul>
<b>Environmental</b>	<ul style="list-style-type: none"> <li>• <b>Protected</b> Rare and threatened flora and fauna, ecological communities and wetlands.</li> <li>• <b>Priority</b> Fire sensitive species and ecological communities.</li> <li>• <b>Locally important</b> Nature conservation and research sites, habitats, species and communities, areas of visual amenity.</li> </ul>
<b>Cultural</b>	<ul style="list-style-type: none"> <li>• <b>Aboriginal heritage</b> Places of indigenous significance.</li> <li>• <b>Recognised heritage</b> Assets afforded legislative protection through identification by the National Trust, State Heritage List or Local Planning Scheme Heritage List.</li> </ul>

Asset Category	Asset Subcategories
	<ul style="list-style-type: none"> <li>• <b>Local heritage</b> Assets identified in a Municipal Heritage Inventory or by the community.</li> <li>• <b>Other</b> Other assets of cultural value, for example community centres and recreation facilities.</li> </ul>

*Table 12: Asset Categories and Subcategories*

### 4.3 Assessment of Bushfire Risk

Risk assessments have been undertaken for each asset or group of assets identified using the methodology described in the Guidelines.

The Asset Risk Register at **Appendix 3** shows the consequence and likelihood ratings assigned to each asset or group of assets identified and the subsequent risk rating.

#### 4.3.1 Likelihood Assessment

Likelihood is described as the chance of a bushfire igniting, spreading and reaching an asset (or group of assets). The likelihood assessment considers fuel age and separation distance as the key factors that influence the likelihood of fire occurring at an intensity that will damage nearby asset/s.

The inputs that apply when determining the likelihood rating are:

- **Separation Distance** - The distance between the asset and the hazard vegetation, measured in meters.
- **Fuel Age** - The period of time elapsed since the fuel was last burnt, measured in years.

Likelihood Rating	Description
<b>Almost Certain</b> (Sure to Happen)	<ul style="list-style-type: none"> <li>• Is expected to occur in most circumstances;</li> <li>• High level of recorded incidents and/or strong anecdotal evidence; and/or</li> <li>• Strong likelihood the event will recur; and/or</li> <li>• Great opportunity, reason or means to occur;</li> <li>• May occur more than once in 5 years.</li> </ul>
<b>Likely</b> (Probable)	<ul style="list-style-type: none"> <li>• Regular recorded incidents and strong anecdotal evidence; and /or</li> <li>• Considerable opportunity, reason or means to occur;</li> <li>• May occur at least once in 5 years.</li> </ul>
<b>Possible</b> (feasible but < probable)	<ul style="list-style-type: none"> <li>• Should occur at some stage; and/or</li> <li>• Few, infrequent, random recorded incidents or little anecdotal evidence; and/or</li> <li>• Some opportunity, reason or means to occur.</li> </ul>
<b>Unlikely</b> (Improbable, not likely)	<ul style="list-style-type: none"> <li>• Would only occur under exceptional circumstances.</li> </ul>

*Table 13: Likelihood Ratings*

#### 4.3.2 Consequence Assessment

Consequence is described as the outcome or impact of a bushfire event. The approach used to determine the consequence rating is different for each asset category: Human Settlement, Economic, Environmental and Cultural.

**There are four possible consequence ratings: minor, moderate, major and catastrophic.**

Consequence Rating	Descriptions
<b>Minor</b>	<ul style="list-style-type: none"><li>• No fatalities.</li><li>• Near misses or minor injuries with first aid treatment possibly required.</li><li>• No persons are displaced.</li><li>• Little or no personal support (physical, mental, emotional) required.</li><li>• Inconsequential or no damage to an asset, with little or no specific recovery efforts required beyond the immediate clean-up.</li><li>• Inconsequential or no disruption to community.</li><li>• Inconsequential short-term failure of infrastructure or service delivery. (Repairs occur within 1 week, service outages last less than 24 hours.)</li><li>• Inconsequential or no financial loss. Government sector losses managed within standard financial provisions. Inconsequential business disruptions.</li></ul>
<b>Moderate</b>	<ul style="list-style-type: none"><li>• Isolated cases of serious injuries, but no fatalities. Some hospitalisation required, managed within normal operating capacity of health services.</li><li>• Isolated cases of displaced persons who return within 24 hours.</li><li>• Personal support satisfied through local arrangements.</li><li>• Localised damage to assets that is rectified by routine arrangements.</li><li>• Community functioning as normal with some inconvenience.</li><li>• Isolated cases of short to mid-term failure of infrastructure and disruption to service delivery. (Repairs occur within 1 week to 2 months, service outages last less than 1 week.)</li><li>• Local economy impacted with additional financial support required to recover. Government sector losses require activation of reserves to cover loss. Disruptions to businesses lead to isolated cases of loss of employment or business failure.</li><li>• Isolated cases of damage to environmental or cultural assets, one-off recovery efforts required, but with no long term effects to asset.</li></ul>
<b>Major</b>	<ul style="list-style-type: none"><li>• Isolated cases of fatalities.</li><li>• Multiple cases of serious injuries. Significant hospitalisation required leading to health services being overstretched.</li><li>• Large number of persons displaced (more than 24 hours</li></ul>

Consequence Rating	Descriptions
	<p>duration).</p> <ul style="list-style-type: none"> <li>• Significant resources required for personal support.</li> <li>• Significant damage to assets, with ongoing recovery efforts and external resources required.</li> <li>• Community only partially functioning. Widespread inconvenience, with some services unavailable.</li> <li>• Mid to long-term failure of significant infrastructure and service delivery affecting large parts of the community. Initial external support required. (Repairs occur within 2 to 6 months, service outages last less than a month.)</li> <li>• Local or regional economy impacted for a significant period of time with significant financial assistance required. Significant disruptions across industry sectors leading to multiple business failures or loss of employment.</li> <li>• Significant damage to environmental or cultural assets that require major rehabilitation or recovery efforts.</li> <li>• Localised extinction of native species. This may range from loss of a single population to loss of all of the species within the BRM Plan area (for a species which occupies a greater range than just the BRM Plan area).</li> </ul>
<b>Catastrophic</b>	<ul style="list-style-type: none"> <li>• Multiple cases of fatalities.</li> <li>• Extensive number of severe injuries.</li> <li>• Extended and large number requiring hospitalisation, leading to health services being unable to cope.</li> <li>• Extensive displacement of persons for extended duration.</li> <li>• Extensive resources required for personal support.</li> <li>• Extensive damage to assets that will require significant ongoing recovery efforts and extensive external resources.</li> <li>• Community unable to function without significant support.</li> <li>• Long-term failure of significant infrastructure and service delivery affecting all parts of the community. Ongoing external support required. (Repairs will take longer than 6 months, service outages last more than 1 month.)</li> <li>• Regional or state economy impacted for an extended period of time with significant financial assistance required. Significant disruptions across industry sectors leading to widespread business failures or loss of employment.</li> <li>• Permanent damage to environmental or cultural assets.</li> <li>• Extinction of a native species in nature. This category is most relevant to species that are restricted to the BRM Plan area, or also occur in adjoining areas and are likely to be impacted upon by the same fire event. 'In nature' means wild specimens and does not include flora or fauna bred or kept in captivity.</li> </ul>

*Table 14: – Consequence Ratings*

The methodology used to determine the consequence rating for each asset category is based on the following:

- **Consequence Rating - Human Settlement Assets**  
The outcome or impact of a bushfire event on the asset, or a group of assets, measured by the hazard posed by the classified vegetation and the vulnerability of the asset.
- **Consequence Rating - Economic Assets**  
The outcome or impact of a bushfire event on the asset, or a group of assets, measured by the hazard posed by the classified vegetation and vulnerability of the asset.
- **Consequence Rating - Environmental Assets**  
The outcome or impact of a bushfire event on the asset, or a group of assets, measured by the vulnerability of the asset and the potential impact of a bushfire or fire regime.
- **Consequence Rating - Cultural Assets**  
The outcome or impact of a bushfire event on the asset, or a group of assets, measured by the hazard posed by the classified vegetation and the vulnerability of the asset.

#### **4.3.3 Determining Bushfire Hazard (Human Settlement, Economic and Cultural Assets)**

The level of bushfire hazard posed by the classified vegetation for human settlement, economic and cultural assets is determined using a quantified bushfire hazard assessment model.

The bushfire hazard assessment model incorporates the methodology set out in AS3959-2009 Construction of buildings in bushfire prone areas that is used to undertake a Bushfire Attack Level (BAL) assessment.

The Hazard rating is calculated in BRMS using relevant information about the vegetation presenting the greatest hazard to the asset. Classified vegetation located within the Asset Protection Zone (20 metres) and Hazard Separation Zone (80 metres) is the focus of the hazard assessment, as it significantly influences an asset's exposure to mechanisms of bushfire attack (ember attack, radiant heat and direct flame contact).

#### **4.3.4 Assessment of Environmental Assets**

Using available biological information and fire history data, environmental assets with a known minimum fire threshold were assessed to determine if they were at risk from bushfire, within the five year life of the BRM Plan. Environmental assets that would not be adversely impacted by bushfire within the five year period have not been included and assessed in the BRM Plan. The negative impact of a fire on these assets (within the period of this BRM Plan) was determined to be minimal, and may even be of benefit to the asset and surrounding habitat.



*Figure 9: Bushfire Management Zones*

The criteria applied when undertaking a bushfire hazard assessment are as follows:

- **Application of Fire Danger Index (FDI) 80.** - The fire danger index reflects the chance of a fire starting, its rate of spread, its intensity and the difficulty of its suppression, according to various combinations of air temperature, relative humidity, wind speed and both the long and short-term drought effects. For the purpose of establishing a hazard assessment for an asset an FDI of 80 (Grass Fire Danger Index 110) conditions, as per AS3959-2009 are utilised.

Note: The higher the FDI, the less chance of controlling a fire until weather conditions improve. Utilising the FDI, predictions can be made regarding a fire's rate of spread, intensity and the potential for various suppression tactics to succeed. The FDI is the basis for determining the Fire Danger Rating (Figure 11), which is a scale developed to assist communities to better understand information about fire danger.<sup>23</sup>

- **Classification of vegetation** - Vegetation is classified as per the vegetation categories listed in the Guidelines for Preparing a Bushfire Risk Management Plan, and in accordance with AS3959-2009. Vegetation that meets the low hazard exclusion criteria is automatically rated as low hazard. Where more than one vegetation type is present, the assessment is based on the vegetation type that presents the greatest hazard to the asset.
- **Separation Distance** - Is measured from the closest part of the assets, such as a house, to the nearest edge of the hazard vegetation. Where there is a flammable structure within 6 metres (e.g. a shed or patio next to a house), it is included as a part of the asset.
- **Slope** - Slope has a direct impact on the rate of spread of a fire doubling for every 10 degrees slope when travelling uphill towards an asset. Two slope measurements are used in the hazard assessment calculation – the slope of the land under the hazard vegetation and the slope of the land between the asset and the hazard vegetation.

<sup>2</sup> Source: Department of Fire and Emergency Services

<sup>3</sup> Bushfire Risk Management Planning Handbook, DFES (March 2018)



FIRE DANGER RATING	WHAT DOES IT MEAN?	
<b>CATASTROPHIC</b> 100+	<ul style="list-style-type: none"> <li>These are the worst conditions for a bush or grass fire</li> <li>If a fire starts and takes hold, it will be extremely difficult to control and will take significant firefighting resources and cooler conditions to bring it under control</li> </ul>	<ul style="list-style-type: none"> <li>Spot fires will start well ahead of the main fire and cause rapid spread of the fire. Embers will come from many directions</li> <li>Homes are not designed or constructed to withstand fires in these conditions</li> <li>The only safe place to be is away from bushfire risk areas.</li> </ul>
<b>EXTREME</b> 75-99	<ul style="list-style-type: none"> <li>These are very hot, dry and windy conditions for a bush or grass fire</li> <li>If a fire starts and takes hold, it will be unpredictable, move very fast and difficult for firefighters to bring under control</li> </ul>	<ul style="list-style-type: none"> <li>Homes that are prepared to the highest level, have been constructed to bushfire protection levels and are actively defended may provide safety</li> </ul>
<b>SEVERE</b> 50-74	<ul style="list-style-type: none"> <li>Spot fires will start and move quickly. Embers may come from many directions</li> </ul>	<ul style="list-style-type: none"> <li>You must be physically and mentally prepared to defend in these conditions</li> <li>The only safe place to be is away from bushfire risk areas.</li> </ul>
<b>VERY HIGH</b> 32-49	<ul style="list-style-type: none"> <li>These are hot, dry and possibly windy conditions for a bush or grass fire</li> <li>If a fire starts and takes hold, it may be hard for firefighters to control</li> </ul>	<ul style="list-style-type: none"> <li>Well prepared homes that are actively defended can provide safety</li> <li>You must be physically and mentally prepared to defend in these conditions.</li> </ul>
<b>HIGH</b> 12-31	<ul style="list-style-type: none"> <li>If a fire starts, it is likely to be controlled in these conditions and homes can provide safety</li> </ul>	<ul style="list-style-type: none"> <li>Controlled burning may occur in these conditions if it is safe – check to see if permits apply.</li> </ul>
<b>LOW-MODERATE</b> 0-11	<ul style="list-style-type: none"> <li>Be aware of how fires can start and reduce the risk</li> </ul>	

Figure 10: Fire Danger Ratings – Based on Forest Fire Danger Index (FFDI)

Figure 11 shows the comparison between the Forest Fire Danger Index (FFDI) AND THE Grassland Fire Danger Index (GFDI).



Fire danger rating		
Category	Fire Danger Index	
	Forest	Grassland
<b>Catastrophic (Code Red)</b>	100 +	150 +
<b>Extreme</b>	75–99	100–149
<b>Severe</b>	50–74	50–99
<b>Very High</b>	25–49	25–49
<b>High</b>	12–24	12–24
<b>Low–Moderate</b>	0–11	0–11

Figure 11: Comparison between Fire Danger Index (FFDI) and the Grassland Fire Danger Index (GFDI)

The following table illustrates threatened flora and fauna on City of Wanneroo Reserves. The City has adopted a range of mitigation treatment options to ensure the species are protected whilst maintaining treatment of bushfire risks within the areas identified as having an very high and extreme risk rating.

Reserve Name	Suburb	Flora (Threatened)	Fauna (Threatened)
Countryside Park	Two Rocks		Carnaby Cockatoos
Bernard Park	Carabooda		Yellow Rumped Thornbills Quenda
Estrel Park	Wanneroo	Jacksonia sericea	
Nanovich Park	Wanneroo	Jacksonia sericea	
Celadon Park	Banksia Grove	Jacksonia sericea	
Golfview Park	Gnangara	Jacksonia sericea	
Foreshore Reserve	Mindarie	Conostylis pauciflora Hibbertia spicata Styrlidium maritimum	Whire-winged Fairy-wrens Splendid Fairy-wrens New Holland Honeyeaters
Appleby Park	Darch		White-cheeked Honeyeaters Varied Sittellas Yellow Rumped Thornbills
Tranquil Park	Carramar		Thornbills Scarlet Robin Yellow-throated Miner
Alvarez Park	Tapping	Jacksonia Sericea	Yellow Rumped Thornbills Splendid Fairy-wrens Scarlet Robin
Damian Park	Jandabup	Pithocarpa Pulchella	Bronzewing Pigeon
Brazier Park	Yanchep	Melaleuca Cardiophylla	
Coogee Park	Mariginiup	Boronia Purdienana	
Rufus Park	Madeley		Yellow-throated Miner

Waldburg Park	Tapping		Yellow Rumped Thornbills
Boyagin Park	Sinagra	Lasiopetalum Membranaceum	
Anchorage Park	Mindarie		Carnaby's Cockatoos New Holland Honeyeaters
Emerald Park	Carabooda	Pimelia calcicola	Splendid Fairy-wrens
Hepburn Park	Landsdale	Conospermum incurvum Verticordia nitens	White-cheeked Honeyeaters Western Brown Bandicoot
Landsdale Park	Darch	Cyathochaeta equitans Verticordia nitens t	Quenda Western Brush Wallaby Varied Sittellas Carnaby's Cockatoos Rainbow Bee Eaters
Wattle Park	Neerabup		Quenda
Caporn Park	Mariginiup	Jacksonia sericea	Carnaby's Cockatoos Yellow Rumped Thornbills

Table 15: – Threatened Flora and Fauna (City of Wanneroo Reserves)

#### 4.3.5 Local Government Asset Risk Summary

A risk profile for the local government is provided in the summary table below. This table shows the proportion of assets at risk from bushfire in each risk category at the time the BRM Plan was endorsed.

<b>Risk Rating</b> <b>Asset Category</b>	Low	Medium	High	Very High	Extreme
Human Settlement	2.3%	9.5%	14.7%	10.5%	39.1%
Economic	3%	4.3%	3.7%	5.5%	3.8%
Environmental	0	0	0	0	0
Cultural	0.2%	0.3%	0.7%	0.7%	1.7%

Table 16: – Local Government Asset Risk Summary

## 5. Risk Evaluation

### 5.1 Evaluating Bushfire risk

The purpose of evaluating risk is to confirm that the risk rating for each asset is appropriate, to identify treatment priorities and to identify which assets require treatment. (Refer to Section 8.1 and 8.2 of the Guidelines).

The risk rating for each asset has been assessed against the likelihood and consequence descriptions to ensure:

- The rating for each asset reflects the relative seriousness of the bushfire risk to the asset;
- Likelihood and consequence ratings assigned to each asset are appropriate; and

- Local issues have been considered.

## 5.2 Treatment Priorities

The treatment priority for each asset has been automatically assigned by BRMS, based on the asset's risk rating. Table 9 shows how likelihood and consequence combine to give the risk rating and subsequent treatment priority for an asset.

<b>Consequence</b> <b>Likelihood</b>	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)

Table 17: – Treatment Priorities

## 5.3 Risk Acceptability

Risks below a certain level were not considered to require specific treatment during the life of this BRM Plan. They will be managed by routine local government wide controls and monitored for any significant change in risk.

The City managed land that falls within the extreme or very high categories has been prioritised to have fuel management works via prescribed burning or manual fuel removal completed in the 2018/19 financial year by the City's Bush Fire Brigades, Prescribed Burning Contractor, City Parks and Conservation Team.

In most circumstances risk acceptability and treatment will be determined by the land owner, in collaboration with local government and fire agencies. As a general rule, the following courses of action have been adopted for each risk rating.

The City has sent letters to land owners with identified Acid Sulphate/Peat Soils with advice on how to reduce the impact of bushfire on their lands and seeking assistance to ensure their property not only has the statutory firebreaks installed and maintained, but also a plan around water access and supply. It was explained that bushfire risk and prevention is a shared responsibility by state, local governments, landowners and the broader community. The letter also detailed that smoke from peat fires contains chemicals and fine particulates that may cause irritation or more serious health effects. A guide to preventing and suppressing bushfire on organic and acid sulphate soils was included for information.

Risk Rating	Criteria for Acceptance of Risk	Course of Action
<b>Extreme</b> (Priorities 1A, 1B, 1C)	<p>Only acceptable with excellent controls. Urgent treatment action is required.</p> <p>Local Government Wide Controls are not enough to adequately manage the risk. Immediate attention required as a priority.</p>	<ul style="list-style-type: none"> <li>Specific action(s) required in the first 2 years of BRM Plan where resourcing and funding permits</li> <li>Priorities will be made for treatments that will have maximum benefit to multiple assets and critical infrastructure</li> <li>Identification of partnerships with other agencies for strategic mitigation</li> <li>Communication with stakeholders as per the Communications Plan</li> </ul>
<b>Very High</b> (Priorities 2A, 2B, 2C)	<p>Only acceptable with excellent controls. Urgent treatment action is required.</p> <p>Local Government Wide Controls are not enough to adequately manage the risk.</p>	<ul style="list-style-type: none"> <li>Specific action(s) required in the first 2-3 years of BRM Plan where resourcing and funding permits</li> <li>Priorities will be made for treatments that will have maximum benefit to multiple assets and critical infrastructure</li> <li>Identification of partnerships with other agencies for strategic mitigation</li> <li>Communication with stakeholders as per the Communications Plan</li> </ul>
<b>High</b> (Priorities 3A, 3B, 3C, 3D)	<p>Only acceptable with adequate controls.</p>	<ul style="list-style-type: none"> <li>Specific action(s) required in the first 3-4 years of BRM Plan where resourcing and funding permits</li> <li>Where assets fall adjacent to Extreme or Very High assets, treatments may be extended and included where there may be strategic benefit</li> <li>Communication with stakeholders as per the Communications Plan</li> <li>Risk assessment to be reviewed at least once within the life of the plan</li> </ul>
<b>Medium</b> (Priorities 4A, 4B, 4C)	<p>Acceptable with adequate controls. Treatment action is not required, but risk should be monitored.</p> <p>If there is a change in the landscape / environment these assets may need to be reassessed more frequently.</p>	<ul style="list-style-type: none"> <li>Addressed through Local Government Wide Controls</li> <li>Where assets fall adjacent to Extreme or Very High assets, treatments may be extended to include assets with this risk rating, where there may be strategic benefit</li> <li>Communication with stakeholders as per the Communications Plan</li> <li>Risk assessment to be reviewed at least once within the life of the plan</li> </ul>
<b>Low</b> (Priorities 5A, 5B, 5C)	<p>Acceptable with adequate controls. Treatment action is not required, but risk should be monitored.</p> <p>If there is a change in the landscape / environment these assets may need to be reassessed more frequently</p>	<ul style="list-style-type: none"> <li>Addressed through Local Government Wide Controls</li> <li>Specific action is not required</li> </ul>

Table 18: – Criteria for Acceptance of Risk and Course of Action

## 6. Risk Treatment

The purpose of risk treatment is to reduce the likelihood of a bushfire occurring and/or the potential impact of a 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.

There are many strategies available to treat bushfire risk. The treatment strategy (or combination of treatment strategies) selected will depend on the level of risk and the type of asset being treated. Not all treatment strategies will be suitable in every circumstance.

### 6.1 Local Government-Wide Controls

Local government-wide controls are activities that reduce the overall bushfire risk within the City of Wanneroo. These types of treatments are not linked to specific assets, and are applied across all or part of the local government as part of normal business or due to legislative requirements. The following controls are currently in place across the City of Wanneroo:

- Bush Fires Act 1954 Section 33 notices, including applicable fuel management requirements, firebreak standards and annual enforcement programs. The City of Wanneroo also has a firebreak exemption process that allows for individual section 33 notices to be applied tailored to fuel types, environmental sensitivities, terrain and access;
- Declaration and management of Prohibited Burn Times, Restricted Burn Times and Total Fire Bans for the local government area;
- Public education campaigns and the use of Parks and Wildlife Service (PWS) and the Department of Fire and Emergency Services (DFES) state-wide programs, tailored to suit local needs;
- State-wide arson prevention programs developed in conjunction with WA Police and DFES;
- State Planning Framework and Local Planning Schemes, implementation of appropriate land subdivision and building standards in line with DFES, Department of Planning and Building Commission policies and standards;
- Monitoring performance against the BRM Plan and reporting annually to the City of Wanneroo Council and OBRM;
- City of Wanneroo Prescribed Fire Program  
The City currently has one fire protection officer that assesses risk and treats risk on City of Wanneroo managed lands. The City's Emergency Management Team collates and prioritises treatments and conducts a prescribed burning program annually updating BRMS and local government GIS mapping;
- City of Wanneroo Fire and Burning Information Guide  
This guide provides information on burning periods, building protection zones, treatment methods, fire bans, bushfire survival plans and firebreak information and examples. The guide is available in five different languages including Mandarin, Gujarat, Tagalog, Vietnamese and Afrikaans. The guides are located at the City's

libraries and are distributed by the Rangers to assist provide education over enforcement;

- Fire Response Maps of high risk areas include fuel loads and completed treatments, water points, communication plans, control points and contact numbers; and
- Identify, construct and maintain firebreaks and access routes necessary for fire management purposes.

A multi-agency work plan has been developed and is attached at **Appendix 4**. The plan details work to be undertaken as a part of normal business, to improve current controls or to implement new controls to better manage bushfire risk across the local government.

## 6.2 Asset-Specific Treatment Strategies

Asset specific treatments are implemented to protect an individual asset or group of assets, identified and assessed in the BRM Plan as being at risk from bushfire. There are six asset specific treatment strategies:

<b>Fuel Management</b>	Treatment reduces or modifies the bushfire fuel through manual, chemical and prescribed burning methods
<b>Ignition Management</b>	Treatment aims to reduce potential human and infrastructure sources of ignition in the landscape
<b>Preparedness</b>	Treatments aim to improve access and water supply arrangements to assist firefighting operations
<b>Planning</b>	Treatments focus on developing plans to improve the ability of firefighters and the community to respond to bushfire
<b>Community Education</b>	Treatments seek to build relationships, raise awareness and change the behaviour of people exposed to bushfire risk
<b>Other</b>	Local government-wide controls, such as community education campaigns and planning policies, will be used to manage the risk. Asset-specific treatment is not required or not possible in these circumstances

## 6.3 Determining the Treatment Schedule

Efforts will be made to finalise the Treatment Schedule within 12 months of this Plan being endorsed by Council. The Treatment Schedule will be developed in broad consultation with land owners and other stakeholders.

Land owners are ultimately responsible for treatments implemented on their own land. This includes any costs associated with the treatment and obtaining the relevant approvals, permits or licences to undertake an activity. Where agreed, another agency may manage a treatment on behalf of a land owner. However, the onus remains with the land owner to ensure treatments detailed in this BRM Plan are completed.

## 7. Monitoring and Review

Monitoring and review processes are in place to ensure that the BRM Plan remains current and valid. These processes are detailed below to ensure outcomes are achieved in accordance with the *Communication Strategy* and *Treatment Schedule*.

### 7.1 Review

A comprehensive review of this BRM Plan will be undertaken at least once every five years, from the date of Council endorsement. Significant circumstances that may warrant an earlier review of the BRM Plan include:

- Changes to the BRM Plan area, organisational responsibilities or legislation;
- Changes to the bushfire risk profile of the area; or
- Following a major fire event.

### 7.2 Monitoring

BRMS will be used by the City's Community Safety and Emergency Management Team to monitor the risk ratings for each asset identified in the BRM Plan, schedule treatments and record the treatments implemented. The Team will also use the BRMS to provide the City's Executive Management Team with updates on risks and treatments. Risk ratings are reviewed on a regular basis and new assets will be added to the *Asset Risk Register* when they are identified.

### 7.3 Reporting

The City of Wanneroo will submit a BRMS generated annual report to OBRM each year summarising progress made towards implementation of the BRM Plan. The City will also report its progress on the BRM Plan both the Bush Fire Advisory Committee (BFAC) and the Local Emergency Management Committee (LEMC) for review and feedback. Both Committees have officers with considerable fire-fighting skills and experience. A pre fire season report will be submitted to Council annually summarising treatment strategies.



## 8. Glossary

<b>Asset</b>	A term used to describe anything of value that may be adversely impacted by bushfire. This may include residential houses, infrastructure, commercial, agriculture, industry, environmental, cultural and heritage sites.
<b>Asset Category</b>	There are four categories that classify the type of asset – Human Settlement, Economic, Environmental and Cultural.
<b>Asset Owner</b>	The owner, occupier or custodian of the asset itself. Note: this may differ from the owner of the land the asset is located on, for example a communication tower located on leased land or private property.
<b>Asset Register</b>	A component within the Bushfire Risk Management System used to record the details of assets identified in the Bushfire Risk Management Plan.
<b>Asset Risk Register</b>	A report produced within the Bushfire Risk Management System that details the consequence, likelihood, risk rating and treatment priority for each asset identified in the Bushfire Risk Management Plan.
<b>Bushfire</b>	Unplanned vegetation fire. A generic term which includes grass fires, forest fires and scrub fires both with and without a suppression objective. <sup>4</sup>
<b>Bushfire Management Plan</b>	A document that sets out short, medium and long term bushfire risk management strategies for the life of a development. <sup>5</sup>
<b>Bushfire Risk Management</b>	A systematic process to coordinate, direct and control activities relating to bushfire risk with the aim of limiting the adverse effects of bushfire on the community.
<b>Bushfire Hazard</b>	The hazard posed by the classified vegetation, based on the vegetation category, slope and separation distance.
<b>Consequence</b>	The outcome or impact of a bushfire event.
<b>Draft Bushfire Risk Management Plan</b>	The finalised draft Bushfire Risk Management Plan (BRM Plan) is submitted to the OBRM for review. Once the OBRM review is complete, the BRM Plan is called the 'Final BRM Plan' and can be progressed to local government council for endorsement.

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<sup>4</sup> Australasian Fire and Emergency Service Authorities Council 2012, *AFAC Bushfire Glossary*, AFAC Limited, East Melbourne.

<sup>5</sup> Western Australian Planning Commission 2015, *State Planning Policy 3.7: Planning in Bushfire Prone Areas*, WAPC, Perth.

<b>Emergency Risk Management Plan</b>	A document (developed under <i>State Emergency Management Policy 2.9</i> ) that describes how an organisation(s) intends to undertake the activities of emergency risk management based on minimising risk. These plans help inform the ongoing development of Local Emergency Management Arrangements (LEMA) and Westplans.
<b>Geographic Information System (GIS)</b>	A data base technology, linking any aspect of land-related information to its precise geographic location. <sup>6</sup>
<b>Geographic Information System (GIS) Map</b>	The mapping component of the Bushfire Risk Management System. Assets, treatments and other associated information is spatially identified, displayed and recorded within the GIS Map.
<b>Land Owner</b>	The owner of the land, as listed on the Certificate of Title; or leaser under a registered lease agreement; or other entity that has a vested responsibility to manage the land.
<b>Likelihood</b>	The chance of something occurring. In this instance, the chance of a bushfire igniting, spreading and reaching the asset.
<b>Locality</b>	The officially recognised boundaries of suburbs (in cities and larger towns) and localities (outside cities and larger towns).
<b>Planning Area</b>	A geographic area determine by the local government which is used to provide a suitable scale for risk assessment and stakeholder engagement.
<b>Priority</b>	See Treatment Priority.
<b>Recovery Cost</b>	The capacity of an asset to recover from the impacts of a bushfire.
<b>Responsible Person</b>	The person responsible for planning, coordinating, implementing, evaluating and reporting on a risk treatment.
<b>Risk Acceptance</b>	The informed decision to accept a risk, based on the knowledge gained during the risk assessment process.
<b>Risk Analysis</b>	The application of consequence and likelihood to an event in order to determine the level of risk.
<b>Risk Assessment</b>	The systematic process of identifying, analysing and evaluating risk.

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<sup>6</sup> Landgate 2015, *Glossary of terms*, Landgate, Perth

<b>Risk Evaluation</b>	The process of comparing the outcomes of risk analysis to the risk criteria in order to determine whether a risk is acceptable or tolerable.
<b>Risk Identification</b>	The process of recognising, identifying and describing risks.
<b>Risk Manager</b>	The organisation or individual responsible for managing a risk identified in the Bushfire Risk Management Plan; including review, monitoring and reporting.
<b>Risk Register</b>	A component within the Bushfire Risk Management System used to record, review and monitor risk assessments and treatments associated with assets recorded in the Bushfire Risk Management Plan.
<b>Risk Treatment</b>	A process to select and implement appropriate measures undertaken to modify risk.
<b>Rural</b>	Any area where in residences and other developments are scattered and intermingled with forest, range, or farm land and native vegetation or cultivated crops. <sup>7</sup>
<b>Rural Urban Interface (RUI)</b>	The line or area where structures and other human development adjoin or overlap with undeveloped bushland. <sup>8</sup>
<b>Slope</b>	The angle of the ground's surface measured from the horizontal.
<b>Tenure Blind</b>	An approach where multiple land parcels are consider as a whole, regardless of individual ownership or management arrangements.
<b>Treatment</b>	An activity undertaken to modify risk, for example a prescribed burn.
<b>Treatment Objective</b>	The specific aim to be achieved or action to be undertaken, in order to complete the treatment. Treatment objectives should be specific and measurable.
<b>Treatment Manager</b>	The organisation, or individual, responsible for all aspects of a treatment listed in the Treatment Schedule of the Bushfire Risk Management Plan, including coordinating or undertaking work, monitoring, reviewing and reporting.
<b>Treatment</b>	The order, importance or urgency for allocation of funding, resources

<sup>7</sup> Australasian Fire and Emergency Service Authorities Council 2012, *AFAC Bushfire Glossary*, AFAC Limited, East Melbourne

<sup>8</sup> Australasian Fire and Emergency Service Authorities Council 2012, *AFAC Bushfire Glossary*, AFAC Limited, East Melbourne

<b>Priority</b>	and opportunity to treatments associated with a particular asset. The treatment priority is based on an asset's risk rating.
<b>Treatment Schedule</b>	A report produced within the Bushfire Risk Management System that details the treatment priority of each asset identified in the Bushfire Risk Management Plan and the treatments scheduled.
<b>Treatment Strategy</b>	The broad approach that will be used to modify risk, for example fuel management.
<b>Treatment Type</b>	The specific treatment activity that will be implemented to modify risk, for example a prescribed burn.
<b>Vulnerability</b>	The susceptibility of an asset to the impacts of bushfire.

## 9. Common Abbreviations

APZ	Asset Protection Zone
BRM Plan	Bushfire Risk Management Plan
BRMS	Bushfire Risk Management System
CALD	Culturally and Linguistically Diverse
DEMC	District Emergency Management Committee
DFES	Department of Fire and Emergency Services
ERMP	Emergency Risk Management Plan
FFDI	Forest Fire Danger Index
FMP	Fire Management Plan
GFDI	Grassland Fire Danger Index
GIS	Geographic Information System
HSZ	Hazard Separation Zone
JAFFA	Juvenile and Family Fire Awareness
LEMA	Local Emergency Management Arrangements
LEMC	Local Emergency Management Committee
LG	Local Government
LMZ	Land Management Zone
OBRM	Office of Bushfire Risk Management
PWS	Parks and Wildlife Service
SEMC	State Emergency Management Committee
SLIP	Shared Land Information Platform
WAPC	Western Australian Planning Commission

## **10. Appendices**

**Appendix 1 - Communication Strategy**

**Appendix 2 - Planning Area Map**

**Appendix 3 - Asset Risk Register**

**Appendix 4 - Local Government Wide Controls, Multi-Agency  
Treatment Work Plan**



**City of Wanneroo**

**Bushfire Risk Management Planning**

**Communication Strategy**



## Document Control

<b>Document Name</b>	Bushfire Risk Management Plan Communications Strategy	<b>Current Version</b>	1.0
<b>Document Owner</b>	City of Wanneroo CEO	<b>Issue Date</b>	February 2019
<b>Document Location</b>	HPE Content Manager 18/442763	<b>Next Review Date</b>	February 2020

## Related Documents

Title	Version	Date
<b>City of Wanneroo Bushfire Risk Management Communication Strategy</b>	1.0	February 2019
<b>Communication Plan</b>	1.0	February 2019

## Amendment List


## 1 INTRODUCTION

A Bushfire Risk Management Plan (BRM Plan) is a strategic document that outlines the approach to the identification, assessment and treatment of assets exposed to bushfire risk within the City of Wanneroo. This Communication Strategy accompanies the BRM Plan for the City of Wanneroo. It documents the communication objectives for the BRM Plan, roles and responsibilities for communication, key stakeholders, target audiences and key messages at each project stage, communication risks and strategies for their management, and communication monitoring and evaluation procedures.

## 2 COMMUNICATIONS OVERVIEW

### Communication Objectives

The communication objectives for the development, implementation and review of the BRM Plan for the City of Wanneroo are as follows:

1. Key stakeholders understand the purpose of the BRM Plan and their role in the bushfire risk management planning process;
2. Stakeholders who are essential to the bushfire risk management planning process, or can supply required information, are identified and engaged in a timely and effective manner;
3. Relevant stakeholders are involved in decisions regarding risk acceptability and treatment;
4. Key stakeholders engage in the review of the BRM Plan as per the schedule in place for the local government area; and
5. The community and other stakeholders engage with the bushfire risk management planning process and as a result are better informed about bushfire risk and understand their responsibilities to address bushfire risk on their own land.

### Communication Roles and Responsibilities

City of Wanneroo is responsible for the development, implementation and review of the Communication Strategy. Key stakeholders support local government by participating in the development and implementation of the Communications Strategy as appropriate. An overview of communication roles and responsibilities follows:

- City of Wanneroo Chief Executive Officer, responsible for endorsement of the BRM Plan Communications Strategy;
- Manager Community Safety and Emergency Management, responsible for monitoring and reporting on the BRM Plan and Communication strategy;
- Manager Communications, Marketing & Events Communications, Marketing & Events, City of Wanneroo, responsible for external communications with local government area; and

- Community Emergency Services Manager, Department of Fire and Emergency Services, is responsible for operational level communication between the City of Wanneroo, Department of Fire and Emergency Services and the Office of Bushfire Risk Management.

## Key Stakeholders for Communication

The following table identifies key stakeholders in bushfire risk management planning. 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.

Stakeholder	Role or interest	Level of impact of outcomes	Level of engagement
<b>City of Wanneroo</b>	Facilitation of BRM Plan, Land Managers	High	Consult, Involve and Inform
<b>Department of Fire and Emergency Services</b>	Assist the City with implementation and communication of BRM Plan.	High	Consult, Collaborate, Involve and Inform
<b>Office of Bushfire Risk Management</b>	Significant role in plan development, implementation and review	Medium	Inform, consult and collaborate
<b>Department of Biodiversity, conservation and Attractions (Parks and Wildlife)</b>	Significant role in treatment development, implementation and review. Asset identification, Land Managers	High	Consult, Involve and Inform
<b>Service Providers</b>	Asset identification, Land Managers	Medium	Consult and Inform
<b>Private Land Owners</b>	Asset / Land Manager	Medium	Consult, Inform and Empower
<b>Business Owners</b>	Land Managers / Impact of bushfire on business	Low	Consult, Inform and Empower
<b>Interest Groups</b>	Awareness of BRM Plan, Consultation Asset Identification	Low	Consult, Inform and Empower
<b>Bushfire Advisory Committee, Local Emergency Management Committee</b>	Role in plan development and review	High	Inform, consult, involve, collaborate and empower
<b>Department of Planning Lands and Heritage</b>	Asset / Land Manager	High	Consult, Involve and Inform
<b>Water Corporation</b>	Asset / Land Manager	High	Consult, Involve and Inform
<b>Main Road</b>	Critical Infrastructure Owner	High	Consult, Involve and Inform
<b>Western Power</b>	Critical Infrastructure Owner	High	Consult, Involve and Inform

## Communication Plan

Timing of Communication	Stakeholder (s)	Communication Objective(s)	Communication Method	Key Message or Purpose	Responsibility	Identified Risks to Communication	Strategy to Manage Risks	Monitoring and Evaluation Method
<b>Development of the BRM Plan</b>								
<b>Life of Plan</b>	City of Wanneroo Councillors and Executive Management Team	All (1-5)	<ul style="list-style-type: none"> <li>Emails</li> <li>Meetings</li> </ul>	<ul style="list-style-type: none"> <li>Informed, consulted</li> <li>Accountable/responsible</li> <li>Review and input into Plan.</li> </ul>	Director Community & Place	<ul style="list-style-type: none"> <li>Time constraints</li> <li>Unclear message</li> </ul>	<ul style="list-style-type: none"> <li>Planning and time management</li> </ul>	<ul style="list-style-type: none"> <li>Feedback, questions and level of support received</li> </ul>
<b>Life of plan</b>	Bushfire Advisory Committee (BFAC) / Local Emergency Management Committee (LEMC)	All (1-5)	<ul style="list-style-type: none"> <li>Meetings (Quarterly)</li> <li>Face to Face</li> </ul>	<ul style="list-style-type: none"> <li>Engaged in process of BRM Plan</li> <li>Treatment Schedule and Risk Analysis</li> </ul>	CESM/CBFCO CS&EM	<ul style="list-style-type: none"> <li>Time constraints</li> <li>Unclear message</li> </ul>	<ul style="list-style-type: none"> <li>Prepare presentation for each BFAC</li> <li>Provide updates as required</li> </ul>	<ul style="list-style-type: none"> <li>Feedback, treatments negotiated and supported by committee.</li> </ul>
<b>Life of Plan</b>	Department of Biodiversity Conservation & Attractions (Parks & Wildlife)	1 – 3 and 5	<ul style="list-style-type: none"> <li>Face to face meetings</li> <li>Email</li> <li>Telephone</li> </ul>	<ul style="list-style-type: none"> <li>Confirmation of environmental assets</li> <li>Identification of Parks &amp; Wildlife burn plans</li> <li>Confirming project objectives, seeking input into treatment plans and providing project updates</li> <li>Development of treatment options</li> </ul>	CESM/CBFCO CS&EM BRMO	<ul style="list-style-type: none"> <li>Time constraints</li> <li>No plan</li> <li>Availability of BFB volunteers</li> </ul>	<ul style="list-style-type: none"> <li>Clarify misunderstandings and intention of plan</li> <li>Confirm benefits</li> <li>Preparation</li> <li>Ensure current information in BRM Plan</li> <li>Project available</li> </ul>	<ul style="list-style-type: none"> <li>Feedback</li> <li>Support for BRM Plan process</li> <li>Level of engagement</li> </ul>

Timing of Communication	Stakeholder (s)	Communication Objective(s)	Communication Method	Key Message or Purpose	Responsibility	Identified Risks to Communication	Strategy to Manage Risks	Monitoring and Evaluation Method
Life of Plan	Land Managers Land Owners	1 and 2	<ul style="list-style-type: none"> <li>• Social Media</li> <li>• City Website</li> <li>• Face to face meetings</li> <li>• Community workshops and forums, meetings</li> </ul>	<ul style="list-style-type: none"> <li>• Inform of the BRM Plan process</li> <li>• Identify valued assets</li> <li>• Identify existing controls</li> </ul>	CS&EM/FPO	<ul style="list-style-type: none"> <li>• Limit Resources</li> <li>• Stakeholder not identified</li> <li>• Limit engagement from Stakeholder</li> </ul>	<ul style="list-style-type: none"> <li>• Time management</li> <li>• Widespread consultation</li> </ul>	<ul style="list-style-type: none"> <li>• Engaged throughout process</li> <li>• Feedback received</li> <li>• Success of outcomes</li> </ul>
Life of Plan	Asset Owners	1 and 2	<ul style="list-style-type: none"> <li>• City Website,</li> <li>• Face to face meetings,</li> <li>• Community workshops and forums,</li> </ul>	<ul style="list-style-type: none"> <li>• Inform of the BRM Plan process</li> <li>• Identify valued assets</li> <li>• Identify existing controls</li> </ul>	CS&EM/FPO	<ul style="list-style-type: none"> <li>• Media not reaching majority</li> <li>• Workshops and forums could get abstracted by other agendas</li> </ul>	<ul style="list-style-type: none"> <li>• Newspaper and website details</li> <li>• Chair meetings with strict agenda and purpose</li> </ul>	<ul style="list-style-type: none"> <li>• Engaged throughout process</li> <li>• Feedback received</li> <li>• Success of outcomes</li> </ul>
Life of Plan	Service Providers	1 and 2	<ul style="list-style-type: none"> <li>• Email</li> <li>• Phone Call</li> <li>• Face to face meetings</li> </ul>	<ul style="list-style-type: none"> <li>• Inform of the BRM Plan process</li> <li>• Identify valued assets</li> <li>• Identify existing controls</li> </ul>	CS&EM/FPO	<ul style="list-style-type: none"> <li>• Limit Resources</li> <li>• Stakeholder not identified</li> <li>• Limited engagement from Stakeholder</li> </ul>	<ul style="list-style-type: none"> <li>• Time management</li> <li>• Widespread consultation</li> </ul>	<ul style="list-style-type: none"> <li>• Level of support received</li> <li>• Feedback received</li> <li>• Success of outcomes</li> </ul>
<b>Implementation of the BRM Plan</b>								
Life of Plan	City of Wanneroo Councillors and Executive Management Team	3, 4 and 5	<ul style="list-style-type: none"> <li>• Face to face meetings</li> <li>• Email</li> <li>• Reports</li> </ul>	<ul style="list-style-type: none"> <li>• Risk Analysis and prioritised strategic treatments.</li> </ul>	CS&EM/CBFCO	<ul style="list-style-type: none"> <li>• Incorrect information</li> <li>• Lack of understanding</li> </ul>	<ul style="list-style-type: none"> <li>• Clear communication and regular updates</li> <li>• Clear purpose</li> </ul>	<ul style="list-style-type: none"> <li>• Feedback, questions and level of support received</li> </ul>

Timing of Communication	Stakeholder (s)	Communication Objective(s)	Communication Method	Key Message or Purpose	Responsibility	Identified Risks to Communication	Strategy to Manage Risks	Monitoring and Evaluation Method
<b>Life of plan</b>	Bushfire Advisory Committee (BFAC) / Local Emergency Management Committee (LEMC)	3, 4 and 5	<ul style="list-style-type: none"> <li>Face to face meetings</li> <li>Report</li> </ul>	<ul style="list-style-type: none"> <li>Risk Analysis and prioritised strategic treatments.</li> </ul>	CS&EM/CBFCO	<ul style="list-style-type: none"> <li>Incorrect information</li> </ul>	<ul style="list-style-type: none"> <li>Clear communication and regular updates</li> <li>Clear purpose</li> </ul>	<ul style="list-style-type: none"> <li>Good feedback received on works</li> </ul>
<b>Life of Plan</b>	Land Managers	3, 4 and 5	<ul style="list-style-type: none"> <li>Social Media</li> <li>City Website</li> <li>Face to face meetings</li> <li>Community workshops and forums</li> </ul>	<ul style="list-style-type: none"> <li>Treatment Schedule and Risk Analysis</li> <li>Negotiation of treatments</li> </ul>	CS&EM/FPO	<ul style="list-style-type: none"> <li>Incorrect information</li> <li>Limited engagement from Stakeholder</li> <li>Limit Resources</li> </ul>	<ul style="list-style-type: none"> <li>Well planned and executed sharing of information</li> <li>Negotiations conducted</li> </ul>	<ul style="list-style-type: none"> <li>Feedback and commitment received to implement agreed controls</li> <li>Highly engaged</li> </ul>
<b>Life of Plan</b>	Asset Owners	3, 4 and 5	<ul style="list-style-type: none"> <li>Face to face meetings</li> </ul>	<ul style="list-style-type: none"> <li>Empowerment through Provision of risk analysis information</li> </ul>	CS&EM/FPO	<ul style="list-style-type: none"> <li>Incorrect information</li> <li>Lack of understanding</li> <li>Limited engagement from Stakeholder</li> <li>Limit Resources</li> </ul>	<ul style="list-style-type: none"> <li>Well planned and executed sharing of information</li> <li>Negotiations conducted</li> </ul>	<ul style="list-style-type: none"> <li>Feedback and commitment received to implement agreed controls</li> <li>Highly engaged</li> </ul>



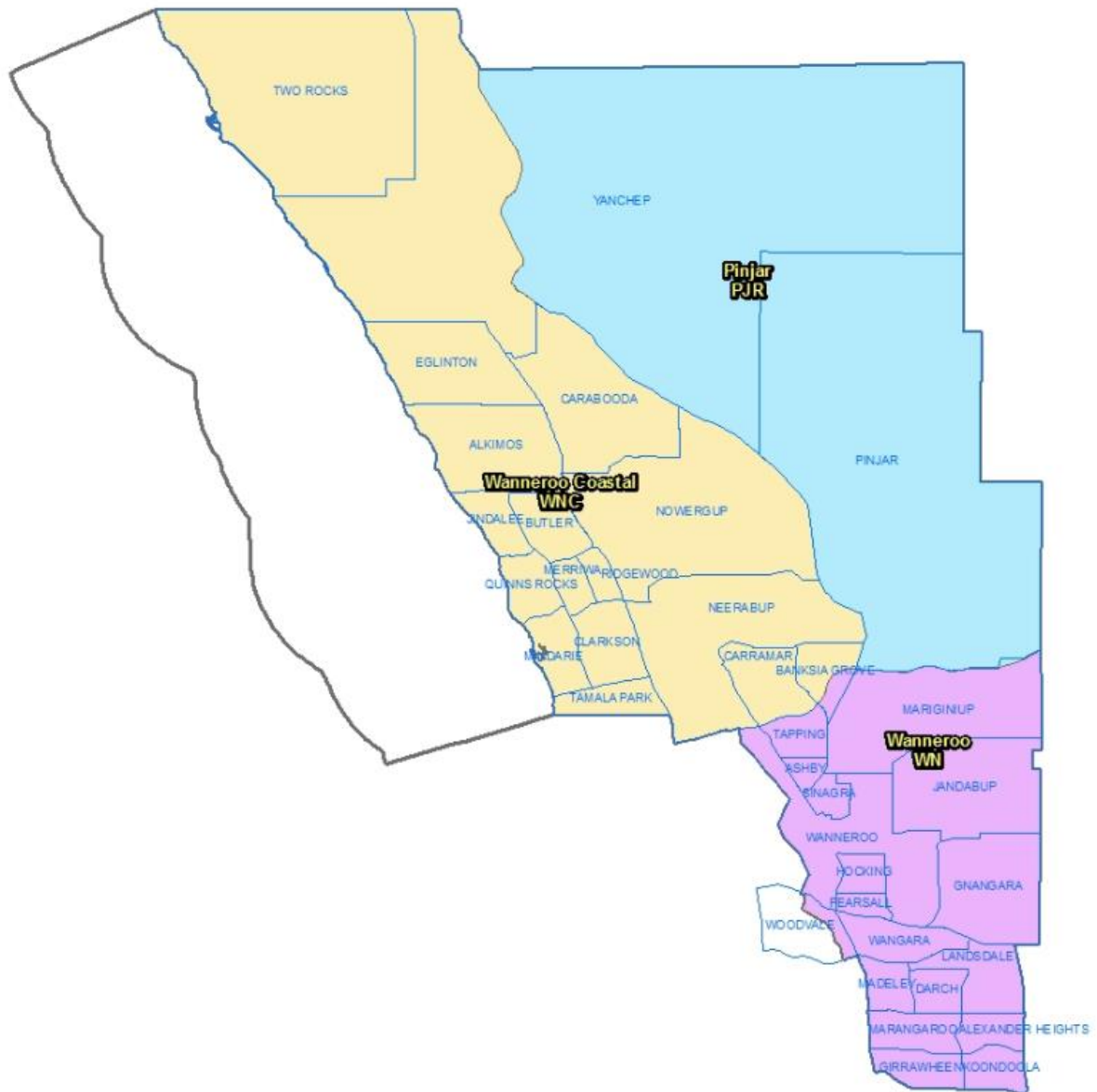
Timing of Communication	Stakeholder (s)	Communication Objective(s)	Communication Method	Key Message or Purpose	Responsibility	Identified Risks to Communication	Strategy to Manage Risks	Monitoring and Evaluation Method
<b>Life of Plan</b>	Service Providers	3, 4 and 5	<ul style="list-style-type: none"> <li>Social Media</li> <li>LG Website</li> <li>Face to face meetings</li> <li>Community workshops and forums</li> </ul>	<ul style="list-style-type: none"> <li>Provision of Risk Analysis and Prioritised strategic treatments.</li> </ul>	CS&EM/CBFCO	<ul style="list-style-type: none"> <li>Incorrect information</li> <li>Limited engagement from Stakeholder</li> <li>Limit Resources</li> </ul>	<ul style="list-style-type: none"> <li>Well planned and executed sharing of information</li> <li>Negotiations conducted</li> </ul>	<ul style="list-style-type: none"> <li>Feedback and commitment received to implement agreed controls</li> </ul>
<b>Life of Plan Refer 7.2 of BRM Plan – “Review”</b>	Stakeholders – Landowners / Land Managers	1 – 3 & 5	<ul style="list-style-type: none"> <li>Email</li> <li>Face to face meetings</li> <li>Presentations</li> <li>Community Engagement</li> </ul>	<ul style="list-style-type: none"> <li>Inform and consult</li> <li>Confirm accountability and responsibility</li> <li>Status and progress of plan</li> <li>Treatment status, gaps and issues to be addressed</li> </ul>	CS&EM/CBFCO	<ul style="list-style-type: none"> <li>Availability</li> <li>Time</li> <li>Loss of Commitment</li> <li>Access to treatment resources</li> <li>Funding</li> </ul>	<ul style="list-style-type: none"> <li>Planned sharing of information</li> <li>Negotiations conducted</li> <li>Communicate funding opportunities when available</li> </ul>	<ul style="list-style-type: none"> <li>Feedback</li> <li>Commitment to implement agreed controls</li> <li>Highly engaged</li> <li>Treatments being completed</li> </ul>
<b>Review of the BRM Plan</b>								
<b>Annually</b>	OBRM/City of Wanneroo Emergency Management Team	All (1-5)	<ul style="list-style-type: none"> <li>Report</li> <li>Email</li> <li>Meeting</li> </ul>	<ul style="list-style-type: none"> <li>Review, Monitor and Reporting</li> <li>Endorse plan</li> <li>Compliance to plan and acceptance of risk</li> </ul>	CS&EM/CBFCO	<ul style="list-style-type: none"> <li>Poor reporting and recording of information</li> <li>Review not completed by BRMB and OBRM</li> </ul>	<ul style="list-style-type: none"> <li>CBFCO/CS&amp;EM-FPO to record data and information appropriately</li> <li>Approved by CBFCO and CS&amp;EM for LG</li> </ul>	<ul style="list-style-type: none"> <li>Feedback from Council received</li> <li>Work completed as a result of plan</li> <li>Good reporting</li> </ul>

Timing of Communication	Stakeholder (s)	Communication Objective(s)	Communication Method	Key Message or Purpose	Responsibility	Identified Risks to Communication	Strategy to Manage Risks	Monitoring and Evaluation Method
<b>Annually</b>	City of Wanneroo Councillors and Executive Team	3 and 4	<ul style="list-style-type: none"> <li>Report</li> <li>Meeting</li> </ul>	<ul style="list-style-type: none"> <li>Report on actions and key performance indicators for BRM Plan process</li> </ul>	CS&EM/CBFCO	<ul style="list-style-type: none"> <li>Objectives not clearly set out</li> <li>Key actions not identified</li> </ul>	<ul style="list-style-type: none"> <li>Discuss with Elected Members and Executive team</li> <li>Clear objectives set</li> </ul>	<ul style="list-style-type: none"> <li>Good reporting and feedback from CEO and Director on work completed</li> </ul>
<b>5 Yearly</b>	City of Wanneroo Councillors and Executive Team	3 and 4	<ul style="list-style-type: none"> <li>Report</li> <li>Email</li> <li>Meeting</li> </ul>	<ul style="list-style-type: none"> <li>Full review of BRM Plan</li> </ul>	CS&EM/CBFCO	<ul style="list-style-type: none"> <li>Review not completed</li> <li>Limited resources to complete review</li> </ul>	Approved by OBRM for LG	<ul style="list-style-type: none"> <li>Feedback from Council received</li> <li>Work completed as a result of plan</li> <li>Good reporting</li> </ul>
<b>Quarterly and as required</b>	City of Wanneroo - Assets	2, 3 and 4	<ul style="list-style-type: none"> <li>Face to face meetings</li> </ul>	<ul style="list-style-type: none"> <li>Report on actions and status of BRM Plan;</li> <li>Continuous improvement</li> </ul>	CS&EM	<ul style="list-style-type: none"> <li>Time;</li> <li>Conflicting priorities</li> </ul>	Forward planning	<ul style="list-style-type: none"> <li>Feedback on work completed</li> <li>Risk ratings reduced</li> <li>Improvements identified and implemented</li> </ul>

Timing of Communication	Stakeholder (s)	Communication Objective(s)	Communication Method	Key Message or Purpose	Responsibility	Identified Risks to Communication	Strategy to Manage Risks	Monitoring and Evaluation Method
<b>Biannually and as required</b>	DFES Regional District	4 and 5	<ul style="list-style-type: none"> <li>Face to face meetings</li> <li>Email</li> </ul>	<ul style="list-style-type: none"> <li>Report on actions and status of BRM Plan;</li> <li>Continuous improvement;</li> <li>UCL/UMR funding</li> </ul>	CS&EM/CBFCO	<ul style="list-style-type: none"> <li>Time;</li> <li>Conflicting priorities</li> </ul>	Plan communications	<ul style="list-style-type: none"> <li>Feedback on work completed</li> <li>Risk ratings reduced</li> <li>Improvements identified and implemented</li> </ul>
<b>Annually</b>	BFAC, DEMC, LEMC, CBFCO	4 and 5	<ul style="list-style-type: none"> <li>Face to face meetings</li> <li>Email</li> <li>Telephone</li> <li>Presentations</li> </ul>	<ul style="list-style-type: none"> <li>Report on actions and status of BRMP</li> <li>Continuous improvement</li> </ul>	CS&EM/CBFCO	<ul style="list-style-type: none"> <li>Availability</li> <li>Time</li> <li>Conflicting priorities</li> <li>Buy in</li> </ul>	Keep informed	<ul style="list-style-type: none"> <li>Feedback on work completed</li> <li>Risk ratings reduced</li> <li>Improvements identified and implemented</li> </ul>
<b>Annually or as required</b>	Stakeholders – Land Owners/Land Managers	4 and 5	<ul style="list-style-type: none"> <li>Face to face meetings</li> <li>Telephone</li> <li>Presentation</li> <li>Community Engagement</li> </ul>	<ul style="list-style-type: none"> <li>Status of treatments</li> <li>Success of treatments</li> <li>Continuous improvement</li> </ul>	CS&EM/CBFCO	<ul style="list-style-type: none"> <li>Availability</li> <li>Time</li> <li>Conflicting priorities</li> <li>Buy in</li> <li>Access to resources</li> </ul>	<ul style="list-style-type: none"> <li>Plan communication</li> <li>Target communication</li> <li>Planned and prepared</li> </ul>	<ul style="list-style-type: none"> <li>Feedback on work completed</li> <li>Risk ratings reduced</li> <li>Improvements</li> </ul>

								identified/ implemen t
Timing of Communication	Stakeholder (s)	Communicatio n Objective(s)	Communication Method	Key Message or Purpose	Responsibility	Identified Risks to Communication	Strategy to Manage Risks	Monitoring and Evaluation Method
<b>Every 2 years or as required</b>	Stakeholders – Other	4 and 5	<ul style="list-style-type: none"> <li>• Face to face meetings</li> <li>• Telephone</li> <li>• Presentations</li> <li>• Community Engagement</li> </ul>	<ul style="list-style-type: none"> <li>• Status of treatments</li> <li>• Success of treatments</li> <li>• Continuous improvement</li> </ul>	CS&EM/CBFCO	<ul style="list-style-type: none"> <li>• Availability</li> <li>• Time</li> <li>• Conflicting priorities</li> <li>• Buy in</li> <li>• Access to resources</li> </ul>	<ul style="list-style-type: none"> <li>• Plan communicatio n</li> <li>• Target communicatio n</li> <li>• Planned and prepared</li> </ul>	<ul style="list-style-type: none"> <li>• Feedback on work complete d</li> <li>• Risk ratings reduced</li> <li>• Improvem ents identified and implemen ted</li> </ul>

# Planning Area Map



# Asset Risk Register

Asset ID	Asset Category	Asset Sub Category	Asset Name	Location Description	Planning Area	Likelihood	Consequence	Risk Rating	Priority
WANPJR004	Economic	Critical Infrastructure	Pinjar Power Station	1330 Perry Road Pinjar	PJR	Almost Certain	Major	Extreme	1C
WANPJR018	Human Settlement	Residential	Neaves Rd East	Neaves Rd East, Mariginiup	PJR	Almost Certain	Catastrophic	Extreme	1A
WANPJR089	Human Settlement	Residential	163 Perry Road	163 Perry Rd, Pinjar	PJR	Likely	Catastrophic	Extreme	1B
WANPJR090	Human Settlement	Residential	171 Perry Rd	171 Perry Rd, Pinjar	PJR	Likely	Catastrophic	Extreme	1B
WANPJR296	Human Settlement	Residential	14 Nisa Rd, Pinjar	14 Nisa Road, Pinjar	PJR	Likely	Catastrophic	Extreme	1B
WANPJR297	Human Settlement	Residential	1139 Old Yanchep Rd, Pinjar	1139 Old Yanchep Road, Pinjar	PJR	Likely	Catastrophic	Extreme	1B
WANPJR298	Human Settlement	Residential	1521 Old Yanchep Rd, Pinjar	1521 Old Yanchep Road, Pinjar	PJR	Likely	Catastrophic	Extreme	1B
WANPJR299	Human Settlement	Residential	1441 Old Yanchep Rd, Pinjar	1441 Old Yanchep Road, Pinjar	PJR	Likely	Catastrophic	Extreme	1B
WANPJR300	Human Settlement	Residential	1621 Old Yanchep Rd, Pinjar	1621 Old Yanchep Road, Pinjar	PJR	Likely	Catastrophic	Extreme	1B
WANPJR301	Human Settlement	Residential	86 Nisa Rd, Pinjar	86 Nisa Road, Pinjar	PJR	Likely	Catastrophic	Extreme	1B
WANPJR302	Human Settlement	Residential	140 Nisa Rd, Pinjar	140 Nisa Road, Pinjar	PJR	Likely	Catastrophic	Extreme	1B
WANPJR304	Human Settlement	Residential	110 Nisa Rd, Pinjar	110 Nisa Road, Pinjar	PJR	Likely	Catastrophic	Extreme	1B
WANPJR320	Human Settlement	Residential	707 Perry Rd, Pinjar	707 Perry Road, Pinjar	PJR	Almost Certain	Catastrophic	Extreme	1A
WANPJR323	Human Settlement	Residential	895 Perry Rd, Pinjar	895 Perry Road, Pinjar	PJR	Almost Certain	Catastrophic	Extreme	1A
WANPJR383	Human Settlement	Residential	881 Perry Rd, Pinjar	881 Perry Road, Pinjar	PJR	Almost Certain	Catastrophic	Extreme	1A
WANWN003	Human Settlement	Residential	Rufus Park	Rufus Parkway Madeley	WN	Likely	Catastrophic	Extreme	1B
WANWN004	Human Settlement	Residential	Amstel Park	Cooper Street Madeley	WN	Likely	Catastrophic	Extreme	1B
WANWN020	Human Settlement	Residential	Landsdale rd	Landsdale Rd Darch	WN	Likely	Catastrophic	Extreme	1B
WANWN022	Human Settlement	Residential	Hepburn Ave Marangaroo	Hepburn Ave south, between Mirrabooka Ave and Bradford Pl Marangaroo	WN	Almost Certain	Major	Extreme	1C

Asset ID	Asset Category	Asset Sub Category	Asset Name	Location Description	Planning Area	Likelihood	Consequence	Risk Rating	Priority
WANWN023	Human Settlement	Residential	Middleton Park South	Goldsworthy Entrance Alexander Heights	WN	Likely	Catastrophic	Extreme	1B
WANWN024	Human Settlement	Residential	Montrose Park	Montrose Ave Cnr Mirrabooka Ave Girrawheen	WN	Likely	Catastrophic	Extreme	1B
WANWN026	Human Settlement	Residential	Marangaroo Golf course East	East of Marangaroo Golf Course	WN	Likely	Catastrophic	Extreme	1B
WANWN027	Human Settlement	Residential	Paloma Park	Mirrabooka Ave Marangaroo	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN029	Human Settlement	Residential	Koondoola open space SW	SW side of Koondoola open space. Waddington Crescent Koondoola	WN	Likely	Catastrophic	Extreme	1B
WANWN030	Human Settlement	Residential	Koondoola open space NW	Koondoola Ave, Koondoola. NW corner of open space	WN	Likely	Catastrophic	Extreme	1B
WANWN038	Human Settlement	Residential	Alvarez Parkway	Alvarez Parkway, Tapping	WN	Likely	Catastrophic	Extreme	1B
WANWN041	Human Settlement	Residential	Spring Hill	Spring Hill Cnr Waldburg Dr.	WN	Likely	Catastrophic	Extreme	1B
WANWN067	Human Settlement	Residential	San Rosa Road	Wanneroo Rd, Scenic Dr and San Rosa Rd.	WN	Likely	Catastrophic	Extreme	1B
WANWN070	Human Settlement	Residential	Paini Way	Paini Way Jandabup	WN	Likely	Catastrophic	Extreme	1B
WANWN071	Human Settlement	Special Risk and Critical Facilities	Pineview Lifestyle Village	Cnr Wanneroo and Ashley Rd Tapping	WN	Likely	Catastrophic	Extreme	1B
WANWN072	Economic	Drinking Water Catchments	167 Townsend Rd Jandabup	167 Townsend Rd Jandabup	WN	Almost Certain	Major	Extreme	1C
WANWN073	Human Settlement	Residential	Watkins Loop	Watkins Loop Tapping	WN	Likely	Catastrophic	Extreme	1B
WANWN074	Human Settlement	Residential	Ashley Road Units	Corner Ashley Rd and Titian Way Tapping	WN	Likely	Catastrophic	Extreme	1B
WANWN075	Human Settlement	Residential	Pinecrest Way	Pinecrest Way Gngara	WN	Likely	Catastrophic	Extreme	1B
WANWN076	Human Settlement	Special Risk and Critical Facilities	Regents Gardens Retirement Resort	33 Drovers Place Wanneroo	WN	Likely	Catastrophic	Extreme	1B
WANWN093	Human Settlement	Residential	Neaves Road	Neaves Road Mariginiup	WN	Likely	Catastrophic	Extreme	1B
WANWN094	Human Settlement	Residential	Adams Road	Adams Road Mariginiup	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN095	Human Settlement	Special Risk and Critical Facilities	Landsdale Farm School	80 Landsdale Road, Darch	WN	Almost Certain	Catastrophic	Extreme	1A



Asset ID	Asset Category	Asset Sub Category	Asset Name	Location Description	Planning Area	Likelihood	Consequence	Risk Rating	Priority
WANWN104	Human Settlement	Residential	Viridan Park	Viridian drive Banksia Grove	WN	Likely	Catastrophic	Extreme	1B
WANWN105	Human Settlement	Residential	Hepburn Park	Landsdale Road Landsdale	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN109	Human Settlement	Residential	Highview Park	Errina Road Alexander Heights	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN111	Human Settlement	Residential	Edgar Griffiths Park	Garden park Dr, Caporn Rd, Franklin Rd, Dundobar Rd	WN	Likely	Catastrophic	Extreme	1B
WANWN112	Human Settlement	Residential	Sinagra East	Caporn Rd, Garden Park Dr, Dundobar Rd Wanneroo	WN	Almost Certain	Major	Extreme	1C
WANWN114	Human Settlement	Residential	Bebich Drive	Bebich Drive Wanneroo	WN	Likely	Catastrophic	Extreme	1B
WANWN115	Human Settlement	Residential	Leach Way Gngara	Leach Way Gngara	WN	Almost Certain	Major	Extreme	1C
WANWN116	Human Settlement	Residential	Vintage Lane Gngara	Vintage Lane Gngara	WN	Almost Certain	Major	Extreme	1C
WANWN117	Human Settlement	Residential	579-621 Gngara Rd.	579-621 Gngara Road Gngara	WN	Likely	Catastrophic	Extreme	1B
WANWN120	Human Settlement	Residential	Badgerup Lake East	Badgerup Rd Wanneroo	WN	Almost Certain	Major	Extreme	1C
WANWN122	Human Settlement	Residential	Lake Lands Drive North. Gngara	Lakelands Drive North, Gngara	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN124	Human Settlement	Residential	Knight Road Gngara	Knight Road Gngara	WN	Almost Certain	Major	Extreme	1C
WANWN128	Human Settlement	Residential	Damian Park	Damian Road, Jandabup	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN129	Human Settlement	Residential	Trichet Road	Trichet Road, Wanneroo	WN	Almost Certain	Major	Extreme	1C
WANWN130	Human Settlement	Residential	Elliot Road	Elliot Road, Wanneroo	WN	Almost Certain	Major	Extreme	1C
WANWN131	Human Settlement	Residential	Hawkins Road	Hawkins Road , Jandabup	WN	Almost Certain	Major	Extreme	1C
WANWN132	Human Settlement	Residential	Wirrega Road	Wirrega Road , Jandabup	WN	Almost Certain	Major	Extreme	1C
WANWN133	Human Settlement	Residential	Chicquita Park	High Road, Wanneroo	WN	Almost Certain	Major	Extreme	1C
WANWN134	Human Settlement	Residential	NW Lake Jandabup	NW Lake Jandabup, Franklin Road.	WN	Almost Certain	Catastrophic	Extreme	1A

Asset ID	Asset Category	Asset Sub Category	Asset Name	Location Description	Planning Area	Likelihood	Consequence	Risk Rating	Priority
WANWN135	Human Settlement	Residential	Lee Steere Drive.	Lee Steere Drive, Mariginiup.	WN	Almost Certain	Major	Extreme	1C
WANWN137	Human Settlement	Special Risk and Critical Facilities	COW Aged Persons Home	9 Amos Road Wanneroo	WN	Likely	Catastrophic	Extreme	1B
WANWN139	Human Settlement	Residential	Amos Road	Amos Road, Wanneroo	WN	Likely	Catastrophic	Extreme	1B
WANWN140	Human Settlement	Residential	71 High Road	71 High Road , Wanneroo	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN143	Human Settlement	Residential	Lake Mariginiup West	Pinjar Road, Mariginiup.	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN201	Human Settlement	Residential	James Street, Mariginiup.	James Street, Mariginiup	WN	Likely	Catastrophic	Extreme	1B
WANWN204	Human Settlement	Residential	SE Lake Mariginiup	Caporn Street X Mariginiup Road, Mariginiup	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN213	Human Settlement	Residential	Greenvale Place, Banksia Grove	Greenvale Place, Banksia Grove	WN	Almost Certain	Major	Extreme	1C
WANWN219	Human Settlement	Residential	Mornington Drive, Banksia Grove	Mornington Drive, Banksia Grove	WN	Almost Certain	Major	Extreme	1C
WANWN221	Human Settlement	Residential	Yandella Prom, Tapping	Yandella Prom, Tapping	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN223	Human Settlement	Residential	Ranch Road, Mariginiup	Ranch Road, Mariginiup	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN225	Human Settlement	Residential	Criveli Parkway Wanneroo	Criveli Parkway Wanneroo	WN	Almost Certain	Major	Extreme	1C
WANWN226	Human Settlement	Residential	Saporona Drive Wanneroo	Saponara Drive, Sinagra	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN227	Human Settlement	Residential	Speranza Parkway Wanneroo	Speranza Parkway Wanneroo	WN	Likely	Catastrophic	Extreme	1B
WANWN228	Human Settlement	Residential	Todema Road Wanneroo	Todema Road / Monet Drive Wanneroo	WN	Almost Certain	Major	Extreme	1C
WANWN238	Human Settlement	Residential	Kirkstall Drive	Kirkstall Drive Hocking	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN239	Human Settlement	Residential	Anfield Parade	Anfield Parade Hocking	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN240	Cultural	Other	30 Ranworth Avenue	30 Ranworth Avenue	WN	Almost Certain	Major	Extreme	1C
WANWN241	Human Settlement	Residential	107 Belgrade Road	107 Belgrade Road Wanneroo	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN242	Human Settlement	Residential	111 Belgrade Avenue	111 Belgrade Avenue Wanneroo	WN	Almost Certain	Catastrophic	Extreme	1A

Asset ID	Asset Category	Asset Sub Category	Asset Name	Location Description	Planning Area	Likelihood	Consequence	Risk Rating	Priority
WANWN243	Human Settlement	Residential	127 Belgrade Avenue	127 Belgrade Avenue Wanneroo	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN244	Human Settlement	Residential	Vincent Road, Sinagra	Vincent Road Sinagra	WN	Almost Certain	Major	Extreme	1C
WANWN247	Human Settlement	Residential	Woodvale Drive	Woodvale Drive Corner Wanneroo Road, Woodvale	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN248	Human Settlement	Residential	Woodvale Drive x Wanneroo Road	Woodvale Drive x Wanneroo Road Woodvale	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN249	Cultural	Other	Charles Ashby House	1000 Wanneroo Road Singara	WN	Almost Certain	Major	Extreme	1C
WANWN328	Human Settlement	Residential	Badgerup Rd, Gngara	462-476 Badgerup Rd and 40-56 Carmignani Rd, Gngara	WN	Almost Certain	Major	Extreme	1C
WANWN331	Human Settlement	Residential	SW Lake Jandabup	SW Lake Jandabup. Franklin and Trichet Roads.	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN347	Human Settlement	Residential	141 Townsend Rd, Mariginiup	141 Townsend Road, Mariginiup	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN348	Human Settlement	Residential	129 Townsend Rd, Mariginiup	129 Townsend Road, Mariginiup	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN349	Human Settlement	Residential	109 Townsend Rd, Mariginiup	109 Townsend Road, Mariginiup	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN350	Human Settlement	Residential	170 Rousset Rd, Mariginiup	170 Rousset Road, Mariginiup	WN	Almost Certain	Major	Extreme	1C
WANWN356	Human Settlement	Residential	175 Badgerup Rd, Gngara	175 Badgerup Road, Gngara	WN	Likely	Catastrophic	Extreme	1B
WANWN365	Human Settlement	Residential	55 Stoney Rd, Gngara	55 Stoney Road, Gngara	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN370	Human Settlement	Residential	99 Stoney Rd, Gngara	99 Stoney Road, Gngara	WN	Almost Certain	Major	Extreme	1C
WANWN371	Human Settlement	Residential	Thaxter Park, Landsdale	Thaxter Road, Landsdale	WN	Almost Certain	Major	Extreme	1C
WANWN378	Human Settlement	Residential	Edgbaston Dr, Madeley	Edgbaston Drive, Madeley	WN	Almost Certain	Major	Extreme	1C
WANWN386	Human Settlement	Residential	Berlotto Dr, Tapping	Berlotto Drive, Tapping	WN	Almost Certain	Major	Extreme	1C
WANWN387	Human Settlement	Residential	Carosa Rd, Tapping	Carosa Road, Tapping	WN	Almost Certain	Major	Extreme	1C

Asset ID	Asset Category	Asset Sub Category	Asset Name	Location Description	Planning Area	Likelihood	Consequence	Risk Rating	Priority
WANWN393	Human Settlement	Residential	Solaia Lp, Woodvale	Solaia Loop, Woodvale	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN394	Human Settlement	Residential	Appleby Park	37 Appleby Drive Landsdale	WN	Almost Certain	Major	Extreme	1C
WANWN395	Human Settlement	Residential	Sedano Glade, Landsdale	Sedano Glade, Landsdale	WN	Likely	Catastrophic	Extreme	1B
WANWN396	Human Settlement	Residential	Versailles Park, Landsdale	Monceau Meander, Landsdale	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN397	Human Settlement	Residential	Torrigiani Park	Torrigiani Street, Landsdale	WN	Almost Certain	Major	Extreme	1C
WANWN404	Human Settlement	Residential	69 Rousset Rd, Mariginiup	69 Rousset Road, Mariginiup	WN	Almost Certain	Major	Extreme	1C
WANWN406	Human Settlement	Residential	99 Rousset Rd, Mariginiup	99 Rousset Road, Mariginiup	WN	Almost Certain	Major	Extreme	1C
WANWN407	Human Settlement	Residential	109 Rousset Rd, Mariginiup	109 Rousset Road, Mariginiup	WN	Almost Certain	Major	Extreme	1C
WANWN408	Human Settlement	Residential	11 Lakeview ST, Mariginiup	11 Lakeview Street, Mariginiup	WN	Almost Certain	Major	Extreme	1C
WANWN409	Human Settlement	Residential	19 Lakeview ST, Mariginiup	19 Lakeview Street, Mariginiup	WN	Almost Certain	Major	Extreme	1C
WANWN410	Human Settlement	Residential	31 Lakeview ST, Mariginiup	31 Lakeview Street, Mariginiup	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN411	Human Settlement	Residential	55-61 Lakeview ST, Mariginiup	55-61 Lakeview Street, Mariginiup	WN	Almost Certain	Major	Extreme	1C
WANWN415	Human Settlement	Residential	Caporn Rd, Mariginiup	Corner Caporn Road and Rousset Road, Mariginiup	WN	Almost Certain	Major	Extreme	1C
WANWN419	Human Settlement	Residential	38 Lakeview ST, Mariginiup	38 Lakeview Street, Mariginiup	WN	Almost Certain	Major	Extreme	1C
WANWN421	Human Settlement	Residential	57 Rousset RD, Mariginiup	57 Rousset Road, Mariginiup	WN	Almost Certain	Major	Extreme	1C
WANWN453	Human Settlement	Residential	33 Golfview PL, Gngara	33 Golfview Place, Gngara	WN	Almost Certain	Major	Extreme	1C
WANWN454	Human Settlement	Residential	17 Golfview PL, Gngara	17 Golfview Place, Gngara	WN	Almost Certain	Major	Extreme	1C
WANWN456	Human Settlement	Residential	132 Ross ST, Gngara	132 Ross Street, Gngara	WN	Almost Certain	Major	Extreme	1C
WANWN457	Human Settlement	Residential	11 Golfview St, Gngara	11 Golfview Street, Gngara	WN	Almost Certain	Major	Extreme	1C

Asset ID	Asset Category	Asset Sub Category	Asset Name	Location Description	Planning Area	Likelihood	Consequence	Risk Rating	Priority
WANWN461	Human Settlement	Residential	86 Carmignani RD, Gngangara	86 Carmignani Road, Gngangara	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN462	Human Settlement	Residential	72 Golfview PL, Gngangara	72 Golfview Place, Gngangara	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN465	Human Settlement	Residential	Ashley ST, Wanneroo	Ashley Street, Gngangara	WN	Almost Certain	Major	Extreme	1C
WANWN466	Human Settlement	Residential	63 Grisker RD, Wanneroo	63 Grisker Road, Wanneroo	WN	Likely	Catastrophic	Extreme	1B
WANWN476	Human Settlement	Residential	345-351 Badgerup RD, Wanneroo	345-351 Badgerup Road, Wanneroo	WN	Likely	Catastrophic	Extreme	1B
WANWN480	Human Settlement	Residential	60-66 Jambanis RD, Wanneroo	60-66 Jambanis Road, Wanneroo	WN	Likely	Catastrophic	Extreme	1B
WANWN481	Human Settlement	Residential	441 Badgerup RD, Wanneroo	441 Badgerup Road, Wanneroo	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN484	Cultural	Local Heritage	Cockman House	1230 Ocean Reef RD, Woodvale	WN	Almost Certain	Major	Extreme	1C
WANWN485	Human Settlement	Residential	579 Wanneroo RD, Woodvale	579 Wanneroo Road, Woodvale	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN486	Human Settlement	Residential	585 Wanneroo RD, Woodvale	585 Wanneroo Road, Woodvale	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN487	Human Settlement	Residential	26 Woodvale DR, Woodvale	26 Woodvale Drive, Woodvale	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN488	Human Settlement	Residential	Rhoeo OTLK, Sinagra	Rhoeo Outlook, Sinagra	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN491	Human Settlement	Residential	Burbanks ELB, Wanneroo	Burbanks Elbow, Wanneroo	WN	Almost Certain	Major	Extreme	1C
WANWN492	Human Settlement	Residential	122 Dundebur RD, Wanneroo	122 Dundebur Road, Wanneroo	WN	Likely	Catastrophic	Extreme	1B
WANWN493	Human Settlement	Residential	Bonnievale TCE, Wanneroo	Bonnievale Terrace, Wanneroo	WN	Likely	Catastrophic	Extreme	1B
WANWN494	Human Settlement	Residential	Lovero PASS, Wanneroo	Lovero Pass, Wanneroo	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN495	Human Settlement	Residential	Steven ST, Wanneroo	Steven Street, Wanneroo	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN496	Human Settlement	Residential	Wyola LANE, Wanneroo	Wyola Lane, Wanneroo	WN	Likely	Catastrophic	Extreme	1B
WANWN497	Cultural	Other	32 Mulwarrie CIR, Wanneroo	32 Mulwarrie Circle, Wanneroo	WN	Almost Certain	Major	Extreme	1C
WANWN498	Human Settlement	Residential	156 Dundebur RD, Wanneroo	156 Dundebur Road, Wanneroo	WN	Almost Certain	Catastrophic	Extreme	1A

Asset ID	Asset Category	Asset Sub Category	Asset Name	Location Description	Planning Area	Likelihood	Consequence	Risk Rating	Priority
WANWN499	Human Settlement	Residential	170 Dundobar RD, Wanneroo	170 Dundobar Road, Wanneroo	WN	Almost Certain	Major	Extreme	1C
WANWN501	Human Settlement	Residential	Wayford CIR, Wanneroo	Wayford Circle, Wanneroo	WN	Likely	Catastrophic	Extreme	1B
WANWN507	Human Settlement	Residential	991-1037 Wanneroo Rd	Wanneroo rd opposite Servites	WN	Likely	Catastrophic	Extreme	1B
WANWN508	Human Settlement	Residential	James Spiers Dr, Wanneroo	James Spiers Drive, Wanneroo	WN	Almost Certain	Major	Extreme	1C
WANWN509	Human Settlement	Residential	Tyne CR, Wanneroo	Tyne Crescent, Wanneroo	WN	Almost Certain	Major	Extreme	1C
WANWN513	Human Settlement	Residential	141 Belgrade Rd, Wanneroo	141 Belgrade Road, Wanneroo	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN514	Human Settlement	Residential	133 Belgrade RD, Wanneroo	133 Belgrade Road, Wanneroo	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN558	Human Settlement	Residential	214 Neaves RD, Mariginiup	214 Neaves Road, Mariginiup	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN560	Human Settlement	Residential	187 Lakelands DR, Gngara	187 Lakelands Drive, Gngara	WN	Almost Certain	Major	Extreme	1C
WANWN566	Human Settlement	Residential	10 Caporn ST, Sinagra	10 Caporn Street, Sinagra	WN	Likely	Catastrophic	Extreme	1B
WANWN577	Human Settlement	Residential	Brockwell Park	Brockwell Park, Landsdale	WN	Almost Certain	Catastrophic	Extreme	1A
WANWN583	Human Settlement	Special Risk and Critical Facilities	East Wanneroo Primary School	32 High Road, Wanneroo	WN	Almost Certain	Catastrophic	Extreme	1A
WANWNC007	Human Settlement	Residential	Santapola Park	Benenden Ave Alkimos	WNC	Likely	Catastrophic	Extreme	1B
WANWNC011	Human Settlement	Residential	Roundhouse Pde	Roundhouse Pde Jindalee	WNC	Likely	Catastrophic	Extreme	1B
WANWNC012	Human Settlement	Residential	Seetrees/ Breakwater estate	Breakwater Dr Two Rocks	WNC	Likely	Catastrophic	Extreme	1B
WANWNC013	Human Settlement	Residential	Shorehaven East	Shorehaven East Alkimos	WNC	Likely	Catastrophic	Extreme	1B
WANWNC015	Human Settlement	Residential	Graceful Bvd	Graceful Bvd Alkimos	WNC	Likely	Catastrophic	Extreme	1B
WANWNC016	Human Settlement	Residential	Eden Beach south	Eden Bech Southern side.	WNC	Likely	Catastrophic	Extreme	1B
WANWNC036	Human Settlement	Residential	Wallangarra, Carramar	Pinjar Rd West, Carramar	WNC	Likely	Catastrophic	Extreme	1B
WANWNC039	Human Settlement	Residential	Mindarie South	Anchorage Dr, Long Beach Prom. Mindarie.	WNC	Likely	Catastrophic	Extreme	1B
WANWNC044	Human Settlement	Residential	Tapping Way	Tapping Way Quinns Rocks	WNC	Likely	Catastrophic	Extreme	1B

Asset ID	Asset Category	Asset Sub Category	Asset Name	Location Description	Planning Area	Likelihood	Consequence	Risk Rating	Priority
WANWNC046	Human Settlement	Residential	Glasshouse Drive	Glasshouse drive banksia Grove	WNC	Likely	Catastrophic	Extreme	1B
WANWNC047	Human Settlement	Residential	Grandis Bvd	Grandis Bvd, Banksia Grove	WNC	Likely	Catastrophic	Extreme	1B
WANWNC048	Human Settlement	Residential	Carramar Rural	Carramar	WNC	Likely	Catastrophic	Extreme	1B
WANWNC050	Human Settlement	Residential	2 Travertine vista	@ Travertine Vista Carramar	WNC	Likely	Catastrophic	Extreme	1B
WANWNC051	Human Settlement	Residential	15 Travertine Vista	15 Travertine Vista Neerabup	WNC	Likely	Catastrophic	Extreme	1B
WANWNC052	Human Settlement	Residential	569 Flynn Drive	569 Flynn Drive Carramar	WNC	Likely	Catastrophic	Extreme	1B
WANWNC053	Human Settlement	Residential	1720 Wanneroo Road	1720Wanneroo Road Neerabup	WNC	Likely	Catastrophic	Extreme	1B
WANWNC056	Human Settlement	Residential	Elderiana Link	Grandis Bvd, Elderiana Link, Alpina Prom, Banksia Grove	WNC	Likely	Catastrophic	Extreme	1B
WANWNC059	Human Settlement	Residential	Mcallister Bvd	Mcallister Bvd Clarkson , South	WNC	Likely	Catastrophic	Extreme	1B
WANWNC060	Human Settlement	Residential	Whitsunday	Whitsunday Av, Ridgewood Bvd Ridgewood	WNC	Likely	Catastrophic	Extreme	1B
WANWNC061	Cultural	Other	40 Whitsunday	40 Whitsunday Ave Ridgewood	WNC	Likely	Catastrophic	Extreme	1B
WANWNC063	Human Settlement	Residential	Holwell Gardens	Holwell Gardens, Clarkson	WNC	Likely	Catastrophic	Extreme	1B
WANWNC065	Human Settlement	Residential	Broadford	Broadford Ave Butler	WNC	Likely	Catastrophic	Extreme	1B
WANWNC066	Human Settlement	Residential	Emerald Valley	Emerald Drive Carabooda	WNC	Likely	Catastrophic	Extreme	1B
WANWNC069	Human Settlement	Residential	sovereign Drive	Sovereign Drive Two Rocks	WNC	Likely	Catastrophic	Extreme	1B
WANWNC078	Human Settlement	Residential	Manningtree Approach Butler	Halesworth Pde Butler	WNC	Likely	Catastrophic	Extreme	1B
WANWNC083	Human Settlement	Special Risk and Critical Facilities	Yanchep Police Station	Yanchep Beach Road Yanchep	WNC	Likely	Catastrophic	Extreme	1B
WANWNC088	Human Settlement	Residential	St Andrews North	146 St. Andrews Dr. Yanchep	WNC	Likely	Catastrophic	Extreme	1B
WANWNC098	Human Settlement	Residential	Kinsale Park	Kinsale Drive Mindarie	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC099	Human Settlement	Residential	Ibiza Court	Ibiza Court Mindarie	WNC	Almost Certain	Catastrophic	Extreme	1A

Asset ID	Asset Category	Asset Sub Category	Asset Name	Location Description	Planning Area	Likelihood	Consequence	Risk Rating	Priority
WANWNC100	Human Settlement	Residential	Mindarie Park	Mindarie Drive Quinns Rocks	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC102	Human Settlement	Residential	Hollington Blvd	Hollington Blvd Alkimos	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC103	Human Settlement	Residential	skysail Ave	Skysail Ave alkimos	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC125	Human Settlement	Residential	Celadon Park, Banksia Grove	Celadon Loop Banksia Grove	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC136	Human Settlement	Residential	Bernard Road	Bernard Road , Carabooda	WNC	Almost Certain	Major	Extreme	1C
WANWNC144	Human Settlement	Residential	Pipidinny Road North	Pipidinny Road, Lacey Road Eglinton	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC146	Human Settlement	Residential	SW Yanchep	Blenny Green, Yanchep	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC147	Human Settlement	Residential	Lagoon Dr.	Lagoon Dr Yanchep. Between Newlyn Place and Longfin Vista.	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC148	Human Settlement	Residential	Blackwood Mndr	Blackwood Mndr, Yanchep	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC149	Human Settlement	Residential	Newman Rd, Yanchep	Newman Road , Yanchep	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC150	Human Settlement	Residential	Wilkie Ave, Yanchep	Wilkie Ave, Yanchep	WNC	Almost Certain	Major	Extreme	1C
WANWNC151	Human Settlement	Residential	Cassilda Way, Two Rocks	Cassilda Way, Two Rocks	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC152	Human Settlement	Residential	Charnwood Ave, Two Rocks	Charnwood Ave , Two Rocks	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC158	Human Settlement	Residential	Whitfield Park East	Whitfield Drive, Two Rocks	WNC	Almost Certain	Major	Extreme	1C
WANWNC159	Human Settlement	Residential	Theydon Grove, Two Rocks	Theydon Grove, Two Rocks	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC160	Human Settlement	Residential	Forrest Grove Park, Two Rocks	Forrest Grove, Two Rocks	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC161	Human Settlement	Residential	Blaxland Ave, Two Rocks	Blaxland Ave, Two Rocks	WNC	Almost Certain	Major	Extreme	1C
WANWNC169	Human Settlement	Residential	Bulburin Parade, Yanchep	Bulburin Parade, Yanchep	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC171	Human Settlement	Residential	Beachhaven Drive, Yanchep	Beachhaven Drive, Yanchep	WNC	Almost Certain	Catastrophic	Extreme	1A



Asset ID	Asset Category	Asset Sub Category	Asset Name	Location Description	Planning Area	Likelihood	Consequence	Risk Rating	Priority
WANWNC172	Human Settlement	Residential	Capricorn Escape, Yanchep	Capricorn Esplanade, Yanchep	WNC	Almost Certain	Major	Extreme	1C
WANWNC175	Human Settlement	Residential	Capricorn Esplanade, Yanchep	72-80 Capricorn Esplanade, Yanchep	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC176	Cultural	Other	Yanchep Surf Life Saving Club	3 Brazier Road, Yanchep	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC177	Human Settlement	Residential	Etendue Crescent, Allara	Etendue Crescent, Allara, Eglinton	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC178	Human Settlement	Residential	Sounding Ave, Alkimos	Sounding Ave, Alkimos	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC181	Economic	Tourist and Recreational	Yanchep Lagoon Cafe	10 Brazier Road, Yanchep	WNC	Almost Certain	Major	Extreme	1C
WANWNC185	Human Settlement	Residential	Tobermory Crescent, Butler	Tobermory Crescent, Butler	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC188	Human Settlement	Residential	Seaham Way, Mindarie	Seaham Way, Mindarie	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC189	Human Settlement	Residential	Quinns Road	Quinns Road, Quinns Rocks.	WNC	Almost Certain	Major	Extreme	1C
WANWNC191	Human Settlement	Residential	Royal James Court, Quinns Rocks.	Royal James Court, Quinns Rocks.	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC192	Human Settlement	Residential	St. Anthony Ave, Quinns Rocks.	St. Anthony Ave, Quinns Rocks	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC198	Human Settlement	Residential	Birchwood Loop, Butler	Birchwood Loop, Butler.	WNC	Likely	Catastrophic	Extreme	1B
WANWNC199	Human Settlement	Residential	Redington Drive, Butler	Redington Drive, Butler	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC224	Human Settlement	Special Risk and Critical Facilities	Quinns Rocks Primary School	2 Rees Drive	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC230	Human Settlement	Residential	Dunwich Mews	Dunwich Mews Butler	WNC	Almost Certain	Major	Extreme	1C
WANWNC231	Human Settlement	Residential	Dulwich Mews /Witshire Entrance	Dulwich Mews /Witshire Entrance	WNC	Almost Certain	Major	Extreme	1C
WANWNC232	Human Settlement	Residential	Mokutu Crt	Mokutu Crt Quinns Rocks	WNC	Almost Certain	Major	Extreme	1C
WANWNC237	Human Settlement	Residential	336 Koroborup Road	336 Koroborup Road Carabooda	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC253	Human Settlement	Residential	Brazier Rd, Yanchep	Brazier Rd, Yanchep	WNC	Almost Certain	Major	Extreme	1C
WANWNC257	Human Settlement	Residential	96 Wattle Ave, Neerabup	96 Wattle Ave West, Neerabup.	WNC	Almost Certain	Catastrophic	Extreme	1A

Asset ID	Asset Category	Asset Sub Category	Asset Name	Location Description	Planning Area	Likelihood	Consequence	Risk Rating	Priority
WANWNC258	Human Settlement	Residential	134 Wattle AV	134 Wattle Av	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC259	Human Settlement	Residential	2280 Wanneroo Road, Nowergup	2280 Wanneroo Road, Nowergup	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC261	Human Settlement	Residential	397 Gibbs RD-275 Gibbs RD	4 semi rural lots on Gibbs RD	WNC	Likely	Catastrophic	Extreme	1B
WANWNC262	Human Settlement	Residential	50 Cutler RD	50 Cutler RD	WNC	Likely	Catastrophic	Extreme	1B
WANWNC265	Human Settlement	Residential	214 Carabooda RD	214 Carabooda RD	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC266	Human Settlement	Residential	182 Carabooda RD	182 Carabooda RD	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC268	Human Settlement	Residential	167 Carabooda RD	Farm house and hobby fish farm at 167 Carabooda RD	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC273	Human Settlement	Residential	151 Carabooda RD	Semi rural house at 151 Carabooda RD	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC276	Human Settlement	Residential	110 Carabooda Road - 170 Carabooda RD	110 Carabooda RD-170 Carabooda RD	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC277	Human Settlement	Residential	67,85,98, Carabooda Road	semi rural properties	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC278	Human Settlement	Residential	61 Carabooda RD	61 Carabooda RD	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC279	Economic	Tourist and Recreational	Leopard Lodge, 336 Karoborup RD	Leopard lodge restaurant	WNC	Almost Certain	Major	Extreme	1C
WANWNC284	Human Settlement	Residential	263 Gibbs Road Farm house	263 Gibbs Road Farm house	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC285	Human Settlement	Residential	275 Gibbs Road	275 Gibbs Road	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC287	Human Settlement	Residential	258 Gibbs RD	Semi rural 258 Gibbs RD	WNC	Likely	Catastrophic	Extreme	1B
WANWNC306	Cultural	Local Heritage	Two Rocks Library.	59 Lisford Ave, Two Rocks	WNC	Almost Certain	Major	Extreme	1C
WANWNC307	Human Settlement	Residential	Wild Kingdom Wildlife Park, Yanchep	339 Two Rocks Road, Two Rocks	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC309	Human Settlement	Residential	1 Taronga Pl, Carabooda	1 Taronga Place, Carabooda	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC310	Human Settlement	Residential	43,29 Gibbs RD and 14 Manzas PL	43,29 Gibbs RD and 14 Manzas PL	WNC	Almost Certain	Major	Extreme	1C

Asset ID	Asset Category	Asset Sub Category	Asset Name	Location Description	Planning Area	Likelihood	Consequence	Risk Rating	Priority
WANWNC312	Human Settlement	Residential	99-207 Gibbs RD	Western part of Gibbs RD South of Wesco RD	WNC	Almost Certain	Major	Extreme	1C
WANWNC315	Human Settlement	Residential	44 Romeo Rd, Carabooda	44 Romeo Road, Carabooda	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC326	Human Settlement	Residential	1461 Wanneroo Rd, Neerabup	1461 Wanneroo Road, Neerabup	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC327	Human Settlement	Residential	134,170,222 Old Yanchep RD	old yanchep RD	WNC	Likely	Catastrophic	Extreme	1B
WANWNC343	Human Settlement	Residential	210 McLennan Dr, Nowergup	210 McLennan Drive, Nowergup	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC344	Human Settlement	Special Risk and Critical Facilities	Two Rocks Primary School	51 Resolute Drive	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC345	Human Settlement	Special Risk and Critical Facilities	John Butler Primary College	2 Hamesworth Parade	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC427	Human Settlement	Residential	Selacosa AVE, Jindalee	Selacosa Avenue,Jindalee	WNC	Almost Certain	Major	Extreme	1C
WANWNC432	Human Settlement	Residential	Darbyshire PDE, Alkimos	Darbyshire Parade, Alkimos	WNC	Almost Certain	Major	Extreme	1C
WANWNC433	Human Settlement	Residential	Benson LP, Alkimos	Benson Loop, Alkimos	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC436	Human Settlement	Residential	Spotted WY, Alkimos	Spotted Way, Alkimos	WNC	Almost Certain	Major	Extreme	1C
WANWNC443	Human Settlement	Residential	Flotilla Lane, Alkimos	Flotills Lane, Alkimos	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC445	Human Settlement	Residential	11-15 Brazier RD, Yanchep	11-15 Brazier Road, Yanchep	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC467	Human Settlement	Residential	Wanneroo Rd Neerabup	Wanneroo rd- properties back onto lake Neerabup	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC468	Human Settlement	Residential	80-124 Gibbs Rd	South Gibbs rd X Wanneroo Rd	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC469	Human Settlement	Residential	Dayrell Rd	Dayrell Rd	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC516	Human Settlement	Residential	38 Karoborup RD, Carabooda	38 Karoborup Road, Carabooda	WNC	Almost Certain	Major	Extreme	1C
WANWNC517	Human Settlement	Residential	2632 Wanneroo RD, Nowergup	2632 Wanneroo Road, Nowergup	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC522	Human Settlement	Residential	30 Tifway PL, Carabooda	30 Tifway Place, Carabooda	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC524	Human Settlement	Residential	235 McLennan DR, Nowergup	235 McLennan Drive, Nowergup	WNC	Almost Certain	Catastrophic	Extreme	1A

Asset ID	Asset Category	Asset Sub Category	Asset Name	Location Description	Planning Area	Likelihood	Consequence	Risk Rating	Priority
WANWNC525	Human Settlement	Residential	Dress Circle Farm	79 Dayrell Road, Nowergup	WNC	Likely	Catastrophic	Extreme	1B
WANWNC527	Human Settlement	Residential	89 Gibbs RD, Nowergup	89 Gibbs Road, Nowergup	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC529	Economic	Commercial and Industrial	109 Pederick Rd	Recycle center 109 Pederick Rd	WNC	Almost Certain	Major	Extreme	1C
WANWNC530	Economic	Agricultural	Seedling Nursery, Nowergup	1 Dunstan Road, Nowergup	WNC	Almost Certain	Major	Extreme	1C
WANWNC531	Human Settlement	Residential	44 Delich RD, Carabooda	44 Delich Road, Carabooda	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC532	Human Settlement	Residential	107 Safari PL, Carabooda	107 Safari Place	WNC	Almost Certain	Major	Extreme	1C
WANWNC543	Cultural	Other	Gumblossom Communtiy Centre	17 Tapping Way, Quinns Rocks	WNC	Almost Certain	Major	Extreme	1C
WANWNC545	Human Settlement	Residential	2767 Wanneroo RD, Carabooda	2767 Wanneroo Road, Carabooda	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC546	Human Settlement	Residential	Moorpark AVE, Yanchep	Moorpark Avenue, Yanchep	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC548	Cultural	Local Heritage	Lindsay Homestead, Yanchep	100 Capricorn Esplanade, Yanchep	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC550	Economic	Critical Infrastructure	46 Greenlees WY, Carabooda	46 Greenlees Way, Carabooda	WNC	Almost Certain	Major	Extreme	1C
WANWNC551	Human Settlement	Residential	466 Gibbs RD, Nowergup	466 Gibbs Road, Nowergup	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC553	Cultural	Local Heritage	Yanchep Settlement, 401 Yanchep Beach RD	401 Yanchep Beach Road, Yanchep	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC554	Human Settlement	Residential	379 Yanchep Beach RD, Yanchep	379 Yanchep Beach Road, Yanchep	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC555	Human Settlement	Residential	70 Bailey RD, Carabooda	70 Bailey Road, Carabooda	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC573	Human Settlement	Residential	1531 Wanneroo RD, Neerabup	1531 Wanneroo Road, Neerabup	WNC	Almost Certain	Major	Extreme	1C
WANWNC580	Human Settlement	Residential	Hackney Park	Hackney Park	WNC	Almost Certain	Catastrophic	Extreme	1A
WANWNC581	Human Settlement	Residential	Kaiber Park	Kaiber Park	WNC	Almost Certain	Catastrophic	Extreme	1A
WANPJR096	Human Settlement	Residential	51 Anderson Rd Pinjar	51 Anderson Rd Pinjar	PJR	Possible	Catastrophic	Very High	2B

Asset ID	Asset Category	Asset Sub Category	Asset Name	Location Description	Planning Area	Likelihood	Consequence	Risk Rating	Priority
WANPJR210	Human Settlement	Residential	181 Perry Road, Pinjar	181 Perry Road , Pinjar	PJR	Likely	Major	Very High	2A
WANPJR211	Human Settlement	Residential	193 Perry Road, Pinjar	193 Perry Road, Pinjar	PJR	Likely	Major	Very High	2A
WANPJR212	Human Settlement	Residential	223 Perry Road, Pinjar	223 Perry Road, Pinjar	PJR	Likely	Major	Very High	2A
WANPJR324	Economic	Tourist and Recreational	951 Perry Rd, Pinjar	951 Perry Road, Pinjar	PJR	Almost Certain	Moderate	Very High	2C
WANPJR330	Human Settlement	Residential	23 Chitty Rd,	23 Chitty Road, Pinjar	PJR	Likely	Major	Very High	2A
WANPJR339	Economic	Tourist and Recreational	International Shooting range, Pinjar	Corner Higgins Rd and Wandoo Rd, Pinjar. 339 Neaves Rd Pinjar	PJR	Likely	Major	Very High	2A
WANWN002	Economic	Commercial and Industrial	Drovers	Wanneroo Rd corner Joondalup Dr.	WN	Likely	Major	Very High	2A
WANWN005	Human Settlement	Residential	Susan Park	Conference Gardens Madeley	WN	Likely	Major	Very High	2A
WANWN006	Human Settlement	Residential	Haverford St	Haverford St Alexander Heights	WN	Likely	Major	Very High	2A
WANWN008	Human Settlement	Residential	Ashbrook Ave	Ashbrook Ave Pearsall	WN	Likely	Major	Very High	2A
WANWN009	Economic	Commercial and Industrial	Ashbrook Shops	Ashbrook Shopping Centre, Cnr Willespie Dr and Brooklyn Ave Pearsall.	WN	Likely	Major	Very High	2A
WANWN010	Human Settlement	Special Risk and Critical Facilities	Asbrook Community Centre	125 Willespie Dr Pearsall	WN	Likely	Major	Very High	2A
WANWN021	Economic	Critical Infrastructure	Western Power Sub Station Darch	Western power substation. Cnr Hepburn Ave and Mirrabooka Ave Darch.	WN	Likely	Major	Very High	2A
WANWN031	Human Settlement	Residential	Koondoola open space North	Alexander Heights, Marangaroo Drive	WN	Likely	Major	Very High	2A
WANWN032	Economic	Critical Infrastructure	Mirrabooka Reservoir	87 Koondoola Ave Koondoola.	WN	Almost Certain	Moderate	Very High	2C
WANWN033	Economic	Critical Infrastructure	Comms Tower Koondoola Water	87 Koondoola Ave Koondoola	WN	Likely	Major	Very High	2A
WANWN034	Economic	Critical Infrastructure	Mirrabooka Water Treatment Plant	59 Alexander Drive Koondoola	WN	Likely	Major	Very High	2A
WANWN079	Economic	Critical Infrastructure	Wanneroo Water Supply	104 Belgrade Rd Wanneroo	WN	Almost Certain	Moderate	Very High	2C

Asset ID	Asset Category	Asset Sub Category	Asset Name	Location Description	Planning Area	Likelihood	Consequence	Risk Rating	Priority
WANWN091	Human Settlement	Special Risk and Critical Facilities	Hocking Primary School	50 Gungurru Avenue, Hocking	WN	Likely	Major	Very High	2A
WANWN092	Human Settlement	Residential	201 Rousset Road	201 Rousset Road Mariginiup	WN	Possible	Catastrophic	Very High	2B
WANWN106	Human Settlement	Residential	Palmerston Crt ( Waldburg Park )	Palmerston Court Tapping	WN	Almost Certain	Moderate	Very High	2C
WANWN119	Human Settlement	Residential	Lakelands Drive south, Gngangara	Lakelands Drive south , Gngangara	WN	Likely	Major	Very High	2A
WANWN121	Human Settlement	Residential	Badgerup Lake West	Benmuni Road Wanneroo	WN	Likely	Major	Very High	2A
WANWN123	Human Settlement	Residential	Mary Street, North. Wanneroo	Mary Street Wanneroo	WN	Likely	Major	Very High	2A
WANWN127	Human Settlement	Residential	Bernborough Place, Wanneroo	Bernborough Place, Wanneroo	WN	Likely	Major	Very High	2A
WANWN141	Human Settlement	Residential	37 Anna Place	37 Anna Place, Wanneroo	WN	Possible	Catastrophic	Very High	2B
WANWN142	Human Settlement	Residential	Rome Road	Rome Road, Wanneroo	WN	Possible	Catastrophic	Very High	2B
WANWN206	Human Settlement	Residential	Civic Drive, Wanneroo	Dundobar Road, Wanneroo. Between Civic Dr and Elizabeth Rd.	WN	Possible	Catastrophic	Very High	2B
WANWN229	Human Settlement	Residential	Bonnington Parkway Wanneroo	Bonnington Parkway Wanneroo	WN	Likely	Major	Very High	2A
WANWN250	Economic	Agricultural	Ingham Chickens	1040 Wanneroo Road Singara	WN	Likely	Major	Very High	2A
WANWN340	Human Settlement	Residential	Donnelly Ramble, Wanneroo	Donnelly Ramble, Wanneroo	WN	Possible	Catastrophic	Very High	4A
WANWN346	Human Settlement	Special Risk and Critical Facilities	Pearsall Primary School	Willespie Drive	WN	Likely	Major	Very High	2A
WANWN390	Human Settlement	Residential	Crivelli Pky, Ashby	1-9 Crivelli Parkway, Ashby	WN	Almost Certain	Moderate	Very High	2C
WANWN402	Human Settlement	Residential	San Rosa Rd, Wanneroo	San Rosa Road, Wanneroo	WN	Almost Certain	Moderate	Very High	2C
WANWN403	Cultural	Other	Gospel Baptist Church, Wanneroo	3 Backshall Place, Wanneroo	WN	Almost Certain	Moderate	Very High	2C
WANWN417	Human Settlement	Residential	54 Lakeview ST, Mariginiup	54 Lakeview Street, Mariginiup	WN	Likely	Major	Very High	2A
WANWN418	Human Settlement	Residential	62 Lakeview ST, Mariginiup	62 Lakeview Street, Mariginiup	WN	Almost Certain	Moderate	Very High	2C

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WANWN422	Human Settlement	Residential	1297- 1327 Wanneroo RD, Wanneroo	1297-1327 Wanneroo Road, Wanneroo	WN	Likely	Major	Very High	2A
WANWN423	Human Settlement	Residential	1351 Wanneroo RD, Mariginiup	1351 Wanneroo Road Mariginiup	WN	Likely	Major	Very High	2A
WANWN424	Economic	Tourist and Recreational	Botanic Golf	25 Drovers Place, Wanneroo	WN	Almost Certain	Moderate	Very High	2C
WANWN463	Economic	Agricultural	49 Golfview PL, Gngara	49 Golfview Place, Gngara	WN	Almost Certain	Moderate	Very High	2C
WANWN473	Human Settlement	Residential	33 Grisker RD, Wanneroo	33 Grisker Road, Wanneroo	WN	Likely	Major	Very High	2A
WANWN502	Human Settlement	Residential	Vignerons LP, Hocking	Vignerons Loop, Hocking	WN	Likely	Major	Very High	2A
WANWN503	Human Settlement	Residential	Glen PL, Hocking	Glen Place, Hocking	WN	Likely	Major	Very High	2A
WANWN559	Human Settlement	Residential	330 Neaves RD, Mariginiup	330 Neaves Road, Mariginiup	WN	Almost Certain	Moderate	Very High	2C
WANWN561	Economic	Agricultural	185 Lakelands DR, Gngara	185 Lakelands Drive, Gngara	WN	Almost Certain	Moderate	Very High	2C
WANWN562	Economic	Tourist and Recreational	Lakelands Country Club	120 Clubhouse LA, Gngara	WN	Likely	Major	Very High	2A
WANWN575	Economic	Critical Infrastructure	87 St Stephens CR	Primary school 87 St Stephens CR	WN	Almost Certain	Moderate	Very High	2C
WANWNC014	Economic	Commercial and Industrial	Alkimos Water Plant	Romeo rd Alkimos	WNC	Likely	Major	Very High	2A
WANWNC019	Economic	Commercial and Industrial	Healeys	Healeys Service Station. 2624 Wanneroo Rd Nowergup	WNC	Almost Certain	Moderate	Very High	2C
WANWNC040	Economic	Critical Infrastructure	Tamala Park ground water treatment plant	401 Connolly Drive, Tamala Park	WNC	Likely	Major	Very High	2A
WANWNC043	Human Settlement	Residential	Kahana Parkway	Kahana Parkway Butler	WNC	Likely	Major	Very High	2A
WANWNC064	Human Settlement	Special Risk and Critical Facilities	Quinns Fire Station	14 Hidden Valley Retreat, Clarkson	WNC	Likely	Major	Very High	2A
WANWNC082	Economic	Commercial and Industrial	Yanchep Industrial area.	Stevenage Street Yanchep	WNC	Almost Certain	Moderate	Very High	2C
WANWNC084	Human Settlement	Special Risk and Critical Facilities	Settlers Lifestyle Village, Ridgewood	76 Ridgewood Bvd Ridgewood	WNC	Almost Certain	Moderate	Very High	2C
WANWNC085	Human Settlement	Residential	Kilkee Street	Kilkee Street Ridgewood	WNC	Likely	Major	Very High	2A

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WANWNC086	Human Settlement	Residential	Corinda Way	Corinda Way, Ridgewood	WNC	Likely	Major	Very High	2A
WANWNC087	Economic	Tourist and Recreational	Oceanview Tavern	2310 Wanneroo Road, Nowergup	WNC	Almost Certain	Moderate	Very High	2C
WANWNC145	Human Settlement	Residential	Beonaddy Road	Beonaddy Road Eglinton	WNC	Likely	Major	Very High	2A
WANWNC154	Economic	Commercial and Industrial	190 Flynn Dr, Neerabup	190 Flynn Dr, Neerabup	WNC	Almost Certain	Moderate	Very High	2C
WANWNC156	Human Settlement	Residential	Whitfield Park West	Carfax Place, To Rocks	WNC	Likely	Major	Very High	2A
WANWNC182	Economic	Drinking Water Catchments	Yanchep Water Tanks	Brockman Way, Yanchep	WNC	Almost Certain	Moderate	Very High	2C
WANWNC208	Human Settlement	Residential	Santorini Promenade, Alkimos	Santorini Promenade, Alkimos	WNC	Likely	Major	Very High	2A
WANWNC263	Human Settlement	Residential	292 Carabooda RD	292 Carabooda RD	WNC	Likely	Major	Very High	2A
WANWNC264	Human Settlement	Residential	250 Carabooda RD	250 Carabooda RD	WNC	Likely	Major	Very High	2A
WANWNC288	Human Settlement	Residential	288 Gibbs RD	Semi rural property 288 Gibbs RD	WNC	Possible	Catastrophic	Very High	3C
WANWNC303	Human Settlement	Residential	1,21,49 Wattle AV and 4-128 Gibbs Road	Gibbs rd SE	WNC	Possible	Catastrophic	Very High	2B
WANWNC308	Economic	Agricultural	3049 Wanneroo Rd, Carabooda	3049 Wanneroo Road, Carabooda	WNC	Almost Certain	Moderate	Very High	2C
WANWNC314	Economic	Critical Infrastructure	Electrical Substation, Carabooda	2K Romeo Road, Carabooda	WNC	Almost Certain	Moderate	Very High	2C
WANWNC316	Human Settlement	Residential	243-65 Karoborup RD	65-243 Karoborup RD	WNC	Possible	Catastrophic	Very High	2B
WANWNC317	Human Settlement	Residential	88 Karoborup Road, 34 +14Kiln RD	Kiln RD West	WNC	Possible	Catastrophic	Very High	2B
WANWNC325	Human Settlement	Residential	496+516 Old Yanchep RD	496+516 Old Yanchep RD	WNC	Possible	Catastrophic	Very High	2B
WANWNC425	Economic	Agricultural	12 Reinhold PL, Carabooda	12 Reinhold Place, Carabooda	WNC	Almost Certain	Moderate	Very High	2C
WANWNC428	Human Settlement	Residential	Marginella BVD, Jindalee	Marginella Boulevard, Jindalee	WNC	Almost Certain	Moderate	Very High	2C
WANWNC431	Human Settlement	Residential	Blumann Lane, Alkimos	Blumann Lane, Alkimos	WNC	Likely	Major	Very High	2A
WANWNC434	Human Settlement	Residential	Howden PDE, Alkimos	Howden Parade, Alkimos	WNC	Likely	Major	Very High	2A



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WANWNC435	Human Settlement	Residential	Pateley ST, Alkimos	Pateley Street, Alkimos	WNC	Likely	Major	Very High	2A
WANWNC439	Human Settlement	Residential	Zodiac DR, Alkimos	Zodiac Drive, Alkimos	WNC	Likely	Major	Very High	2A
WANWNC440	Human Settlement	Residential	Cardinal APP, Alkimos	Cardinal Approach, Alkimos	WNC	Likely	Major	Very High	2A
WANWNC441	Human Settlement	Residential	Cleat Lane, Alkimos	Cleat Lane, Alkimos	WNC	Likely	Major	Very High	2A
WANWNC444	Human Settlement	Residential	Marmion AVE, Eglinton	Marmion Ave West, Eglinton	WNC	Likely	Major	Very High	2A
WANWNC446	Human Settlement	Residential	Gregory CT, Two Rocks	Gregory Court, Two Rocks	WNC	Likely	Major	Very High	2A
WANWNC447	Human Settlement	Residential	Mitchell Park, Two Rocks	Blaxland Avenue X Two Rocks Road, Two Rocks	WNC	Likely	Major	Very High	2A
WANWNC455	Human Settlement	Residential	Greenside DR, Yanchep	Greenside Dr Yanchep	WNC	Possible	Catastrophic	Very High	2B
WANWNC519	Human Settlement	Residential	269 Karoborup RD, Carabooda	269 Karoborup Road, Carabooda	WNC	Almost Certain	Moderate	Very High	2C
WANWNC520	Human Settlement	Residential	273 Karoborup RD, Carabooda	273 Karoborup Road, Carabooda	WNC	Likely	Major	Very High	2A
WANWNC523	Economic	Tourist and Recreational	Barbagello Race way	Barbagello Raceway	WNC	Likely	Major	Very High	2A
WANWNC526	Cultural	Other	Wanneroo International Kartway	570 Wattle Avenue, Neerabup	WNC	Likely	Major	Very High	2A
WANWNC528	Economic	Tourist and Recreational	Wanneroo Golf Club	Wanneroo Golf Club, Flynn Dr Old Yanchep	WNC	Almost Certain	Moderate	Very High	2C
WANWNC533	Economic	Tourist and Recreational	Pinjar Park-Speedway	Pinjar park-Speedway	WNC	Likely	Major	Very High	2A
WANWNC539	Human Settlement	Residential	2082 Wanneroo RD, Neerabup	2082 Wanneroo Road, Neerabup	WNC	Likely	Major	Very High	2A
WANWNC540	Human Settlement	Residential	2092 Wanneroo RD, Neerabup	2092 Wanneroo Road, Neerabup	WNC	Likely	Major	Very High	2A
WANWNC542	Cultural	Other	Quinns Rocks Bowling Club	17 Tapping WY, Quinns Rocks	WNC	Likely	Major	Very High	2A
WANWNC544	Human Settlement	Residential	10 Trajanovich LA, Carabooda	10 Trajanovich Lane, Carabooda	WNC	Likely	Major	Very High	2A
WANWNC549	Cultural	Other	Yanchep Community House	7 Lagoon Drive, Yanchep	WNC	Almost Certain	Moderate	Very High	2C
WANWNC552	Economic	Critical Infrastructure	Service Station, Yanchep	361 Yanchep Beach Road, Yanchep	WNC	Almost Certain	Moderate	Very High	2C

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WANWNC556	Human Settlement	Residential	192 Gibbs RD, Nowergup	192 Gibbs Road, Nowergup	WNC	Likely	Major	Very High	2A
WANWNC570	Economic	Agricultural	135 Wesco RD, Nowergup	135 Wesco Road, Nowergup	WNC	Almost Certain	Moderate	Very High	2C
WANWNC574	Economic	Commercial and Industrial	Tamala Park	1700 Marmion Avenue, Clarkson	WNC	Likely	Major	Very High	2A
WANPJR035	Human Settlement	Residential	27 Perry Rd	@7 Perry Rd Pinjar	PJR	Likely	Moderate	High	3A
WANPJR291	Human Settlement	Residential	625 Perry Rd, Pinjar	625 Perry Road, Pinjar	PJR	Possible	Major	High	3B
WANPJR292	Human Settlement	Residential	683 Perry Rd, Pinjar	683 Perry Road, Pinjar	PJR	Possible	Major	High	3B
WANPJR294	Human Settlement	Residential	849 Perry Rd, Pinjar	849 Perry Road, Pinjar	PJR	Possible	Major	High	3B
WANPJR295	Human Settlement	Residential	831 Perry Rd, Pinjar	831 Perry Road, Pinjar	PJR	Possible	Major	High	3B
WANPJR318	Human Settlement	Residential	347 Perry Rd, Pinjar	347 Perry Road, Pinjar	PJR	Possible	Major	High	3B
WANPJR319	Human Settlement	Residential	521 Perry Rd, Pinjar	521 Perry Road, Pinjar	PJR	Possible	Major	High	3B
WANPJR329	Economic	Commercial and Industrial	23 Chitty Rd, Pinjar	23 Chitty Road, Pinjar	PJR	Likely	Moderate	High	3A
WANPJR572	Cultural	Other	Wanneroo Shooting Complex	399 Neaves Road, Pinjar	PJR	Possible	Major	High	3B
WANWN025	Economic	Tourist and Recreational	Montrose tennis courts	Tennis courts, Cnr Montrose and Mirrabooka Ave Girrawheen	WN	Likely	Moderate	High	3A
WANWN068	Human Settlement	Residential	Wanneroo caravan Park	Jacaranda Drive Wanneroo	WN	Likely	Moderate	High	3A
WANWN101	Human Settlement	Residential	Delamare Park	Nambi Parkway Banksia Grove	WN	Likely	Moderate	High	3A
WANWN107	Human Settlement	Residential	Huntington Park	Huntington parkway Landsdale	WN	Almost Certain	Minor	High	3D
WANWN108	Human Settlement	Residential	Kennerton Ave Landsdale	Kennerton Ave Landsdale	WN	Almost Certain	Minor	High	3D
WANWN113	Economic	Tourist and Recreational	Bridgeleigh Reception Centre	198 Mary Street Wanneroo	WN	Likely	Moderate	High	3A
WANWN138	Human Settlement	Residential	Balcomore Place	Balcomore Gardens, Wanneroo	WN	Possible	Major	High	3B
WANWN205	Economic	Critical Infrastructure	Wanneroo Police Station	51 Dundobar Road, Wanneroo	WN	Possible	Major	High	3B

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WANWN207	Human Settlement	Residential	Bibbulmun Entrance, Sinagra	Sinagra Heights, Bibbulmun Entrance, Sinagra	WN	Possible	Major	High	3B
WANWN214	Human Settlement	Residential	Turquoise Loop, Banksia Grove	Turquoise Loop, Banksia Grove	WN	Likely	Moderate	High	3A
WANWN215	Human Settlement	Residential	Harbour Elbow, Banksia Grove	Harbour Elbow, Banksia Grove	WN	Likely	Moderate	High	3A
WANWN216	Human Settlement	Residential	Peridot Turn, Banksia Grove	Peridot Turn, Banksia Grove	WN	Likely	Moderate	High	3A
WANWN217	Human Settlement	Special Risk and Critical Facilities	Grasstree Bend, Banksia Grove	Grasstree Bend, Banksia Grove	WN	Likely	Moderate	High	3A
WANWN218	Economic	Tourist and Recreational	Banksia Grove Community Centre.	14 Grasstree Bend, Banksia Grove	WN	Almost Certain	Minor	High	3D
WANWN220	Human Settlement	Residential	Carbine Loop, Banksia Grove	Carbine Loop, Banksia Grove	WN	Likely	Moderate	High	3A
WANWN222	Human Settlement	Residential	Crosthwait Circle, Tapping	15 Crosthwait Circle, Tapping	WN	Likely	Moderate	High	3A
WANWN332	Cultural	Other	139 Benmuni Rd, Wanneroo	77/ 139 Benmuni Road, Wanneroo	WN	Likely	Moderate	High	3A
WANWN341	Human Settlement	Residential	Turnwood Vista, Wanneroo	Turnwood Vista to Wallawa Street, Wanneroo	WN	Likely	Moderate	High	3A
WANWN342	Human Settlement	Residential	Banyandah Blvd, Wanneroo	Banyandah Blvd, Wanneroo	WN	Likely	Moderate	High	3A
WANWN357	Human Settlement	Residential	159 Badgerup Rd, Wanneroo	159 Badgeruo Road, Wanneroo	WN	Possible	Major	High	3B
WANWN363	Human Settlement	Residential	401 Sydney Rd, Gngara	401 Sydney Road, Gngara	WN	Likely	Moderate	High	3A
WANWN372	Human Settlement	Residential	Shortland Way, Girrawheen	Shortland Way, Girrawheen	WN	Likely	Moderate	High	3A
WANWN373	Human Settlement	Residential	20 Shortland Wy, Girrawheen	20 Shortland Way, Girrawheen	WN	Likely	Moderate	High	3A
WANWN374	Cultural	Other	Koondoola Community Centre	90 Koondoola Ave, Koondoola	WN	Likely	Moderate	High	3A
WANWN375	Cultural	Other	Highview Park Toilets	7 Highview Street, Alexander Heights	WN	Likely	Moderate	High	3A
WANWN391	Human Settlement	Residential	Bocklin Rd, Ashby	Bocklin Road, Ashby	WN	Likely	Moderate	High	3A
WANWN416	Economic	Agricultural	46 Lakeview St, Mariginiup	46 Lakeview Street, Mariginiup	WN	Almost Certain	Minor	High	3D

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WANWN420	Human Settlement	Residential	175 Rousset RD, Mariginiup	175 Rousset Rod, Mariginiup	WN	Likely	Moderate	High	3A
WANWN449	Human Settlement	Residential	Tadorna ENT, Tapping	Tadorna Entrance, Tapping	WN	Likely	Moderate	High	3A
WANWN450	Human Settlement	Residential	Pinjar RD, Tapping	Pinjar Road, Tapping	WN	Likely	Moderate	High	3A
WANWN451	Human Settlement	Residential	Spiccia WY, Sinagra	Spiccia Way, Sinagra	WN	Almost Certain	Minor	High	3D
WANWN459	Economic	Agricultural	40 Stoney RD, Gngara	40 Stoney Road, Gngara	WN	Almost Certain	Minor	High	3D
WANWN470	Human Settlement	Residential	55 Grisker RD, Wanneroo	55 Grisker road, Wanneroo	WN	Possible	Major	High	3B
WANWN471	Human Settlement	Residential	51 Grisker RD, Wanneroo	51 Grisker Road, Wanneroo	WN	Possible	Major	High	3B
WANWN472	Human Settlement	Residential	37 Grisker RD, Wanneroo	37 Grisker Road, Wanneroo	WN	Possible	Major	High	3B
WANWN474	Human Settlement	Residential	17 Grisker RD, Wanneroo	17 Grisker Road, Wanneroo	WN	Possible	Major	High	3B
WANWN475	Human Settlement	Residential	47 Jambanis RD, Wanneroo	47 Jambanis Road, Wanneroo	WN	Possible	Major	High	3B
WANWN477	Economic	Agricultural	78 Jambanis RD, Wanneroo	78 Jambanis Road, Wanneroo	WN	Likely	Moderate	High	3A
WANWN478	Human Settlement	Residential	44 Jambanis Rd, Wanneroo	44 Jambanis Road, Wanneroo	WN	Possible	Major	High	3B
WANWN489	Human Settlement	Residential	Condro Bend, Sinagra	Condro Bend, Sinagra	WN	Possible	Major	High	3B
WANWN490	Human Settlement	Residential	Elizabeth RD, Wanneroo	Elizabeth Road, Dundebur Road, Wanneroo	WN	Possible	Major	High	3B
WANWN500	Human Settlement	Residential	176 Dundebur RD, Wanneroo	176 Dundebur Road, Wanneroo	WN	Likely	Moderate	High	3A
WANWN504	Economic	Commercial and Industrial	JOONDALUP VET HOSPITAL- 19 San Rosa Road	19 San Rosa Road	WN	Likely	Moderate	High	3A
WANWN505	Economic	Commercial and Industrial	JOONDALUP VET HOSPITAL- 19 San Rosa Road	JOONDALUP VET HOSPITAL- 19 San Rosa Road	WN	Likely	Moderate	High	3A
WANWN506	Human Settlement	Residential	200-260 Dundebur Rd	Semi-rural properties on Dundebur Rd	WN	Unlikely	Catastrophic	High	3C
WANWN511	Human Settlement	Residential	Ocean Reef Life Style Village	U1/30 Mangano Place, Wanneroo	WN	Likely	Moderate	High	3A

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WANWN567	Human Settlement	Residential	1 Fortitude BVD	1 Fortitude BVD	WN	Possible	Major	High	3B
WANWN568	Human Settlement	Residential	Ariti AV, Wanneroo	Ariti Avenue, Wanneroo	WN	Likely	Moderate	High	3A
WANWNC017	Human Settlement	Residential	Western Butler	Western side of Butler, North of Kingsbridge.	WNC	Likely	Moderate	High	3A
WANWNC037	Economic	Critical Infrastructure	Neerabup Reservoir	Neerabup National Park, Burns Beach Rd	WNC	Likely	Moderate	High	3A
WANWNC049	Human Settlement	Residential	Carramar South	Golf Links Drive Carramar	WNC	Likely	Moderate	High	3A
WANWNC054	Economic	Tourist and Recreational	Carramar Golf Course	Carramar Golf Course, Golf Links Drive Carramar	WNC	Likely	Moderate	High	3A
WANWNC055	Human Settlement	Residential	West Carramar	Wanneroo Road, West Carramar	WNC	Likely	Moderate	High	3A
WANWNC097	Human Settlement	Residential	Two Rocks Rd	Two Rocks Rd, Two Rocks	WNC	Possible	Major	High	3B
WANWNC126	Economic	Commercial and Industrial	Mather Drive	Mather Drive , Neerabup	WNC	Likely	Moderate	High	3A
WANWNC153	Human Settlement	Residential	NW Oldham Park	NW Oldham Park, Yanchep. ( Galleon Place )	WNC	Almost Certain	Minor	High	3D
WANWNC155	Human Settlement	Residential	Carfax Place, Two Rocks	Carfax Place, Two Rocks	WNC	Likely	Moderate	High	3A
WANWNC162	Human Settlement	Residential	Oldham Park West	Chrisp Place, Yanchep	WNC	Almost Certain	Minor	High	3D
WANWNC164	Human Settlement	Residential	SE Oldham Park	Lagoon Drive, Yanchep	WNC	Almost Certain	Minor	High	3D
WANWNC166	Human Settlement	Residential	Seaside Ave, Yanchep	Seaside Ave, Yanchep	WNC	Almost Certain	Minor	High	3D
WANWNC167	Human Settlement	Residential	Explorer Street, Yanchep	Explorer Street, Yanchep	WNC	Likely	Moderate	High	3A
WANWNC168	Human Settlement	Residential	Granite Park, Yanchep	Granite Place, Yanchep	WNC	Almost Certain	Minor	High	3D
WANWNC183	Human Settlement	Residential	Celeste Street, Eglinton	Celeste Street, Eglinton	WNC	Likely	Moderate	High	3A
WANWNC184	Human Settlement	Residential	Dolphin Drive, Alkimos	Dolphin Drive, Alkimos	WNC	Likely	Moderate	High	3A
WANWNC193	Economic	Tourist and Recreational	Chippys Beach Cafe, Jindalee	99K Jindalee Blvd	WNC	Almost Certain	Minor	High	3D
WANWNC195	Economic	Commercial and Industrial	Quinns Village Shopping Centre	121 Quinns Road, Quinns Rocks	WNC	Likely	Moderate	High	3A
WANWNC196	Human Settlement	Residential	Lynas Way, Quinns Rocks	Lynas Way, Quinns Rocks	WNC	Likely	Moderate	High	3A

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WANWNC209	Human Settlement	Residential	Hawksbill Drive, Alkimos	Hawksbill Drive, Alkimos	WNC	Likely	Moderate	High	3A
WANWNC260	Human Settlement	Residential	53 Wesco RD	Farm house on 53 Wesco RD	WNC	Likely	Moderate	High	3A
WANWNC274	Economic	Agricultural	151 Carabooda RD, Greenhouse	Green houses on 151 Carabooda RD	WNC	Almost Certain	Minor	High	3D
WANWNC280	Human Settlement	Residential	26 Trian RD, 377,293,273,269 Karoborup RD,	Train RD and properties that back onto Karoborup RD	WNC	Possible	Major	High	3B
WANWNC281	Human Settlement	Residential	19 Karoborup RD, 10,20,22 Trajanovich LA	Semi rural properties	WNC	Possible	Major	High	3B
WANWNC282	Human Settlement	Residential	89 and 112 Bailey RD	89 and 112 Bailey RD	WNC	Possible	Major	High	3B
WANWNC283	Economic	Agricultural	263 Gibbs Road, Chicken Farm	263 Gibbs Road	WNC	Likely	Moderate	High	3A
WANWNC286	Human Settlement	Residential	299 and 321 Gibbs Road	299 and 321 Gibbs Road	WNC	Possible	Major	High	3B
WANWNC322	Human Settlement	Residential	4 safari Place	4 safari place	WNC	Possible	Major	High	3B
WANWNC379	Human Settlement	Residential	Kitson Turn, Clarkson	Kitson Turn, Clarkson	WNC	Likely	Moderate	High	3A
WANWNC380	Human Settlement	Residential	Emerson Turn, Clarkson	Emerson Turn, Clarkson	WNC	Likely	Moderate	High	3A
WANWNC381	Human Settlement	Residential	Ballymote GDNS, Ridgewood	43-53 Ballymote Gardens, Ridgewood	WNC	Likely	Moderate	High	3A
WANWNC382	Human Settlement	Residential	145 Rathkeale BVD, Ridgewood	145 Rathkeale Blvd, Ridgewood	WNC	Likely	Moderate	High	3A
WANWNC437	Human Settlement	Residential	Tortoise ST, Alkimos	Tortoise Street, Alkimos	WNC	Almost Certain	Minor	High	3D
WANWNC438	Human Settlement	Residential	Bristlebird CCT, Alkimos	Bristlebird Circuit, Alkimos	WNC	Almost Certain	Minor	High	3D
WANWNC442	Economic	Tourist and Recreational	The Shore Cafe, Alkimos	27 Portside Prom, Alkimos	WNC	Almost Certain	Minor	High	3D
WANWNC448	Human Settlement	Residential	Ashmore AVE, Two Rocks	Ashmore Avenue, Two Rocks	WNC	Possible	Major	High	3B
WANWNC518	Economic	Agricultural	28 Kiln RD, Carabooda	28 Kiln Road, Carabooda	WNC	Likely	Moderate	High	3A
WANWNC521	Human Settlement	Residential	266 Karoborup RD, Carabooda	266 Karoborup Road, Carabooda	WNC	Likely	Moderate	High	3A

Asset ID	Asset Category	Asset Sub Category	Asset Name	Location Description	Planning Area	Likelihood	Consequence	Risk Rating	Priority
WANWNC547	Human Settlement	Special Risk and Critical Facilities	Bethanie Beachside Lifestyle Village	629 Two Rocks Road, Yanchep	WNC	Likely	Moderate	High	3A
WANWNC557	Human Settlement	Residential	180 Gibbs RD, Nowergup	180 Gibbs Road, Nowergup	WNC	Likely	Moderate	High	3A
WANWNC576	Economic	Critical Infrastructure	18 Anchorage Drive	18 Anchorage Drive	WNC	Likely	Moderate	High	3A
WANWNC578	Human Settlement	Residential	Coopers Park	Cooper Park	WNC	Almost Certain	Minor	High	3D
WANPJR269	Human Settlement	Residential	1 Spence Road, Pinjar	1 Spence Road, Pinjar	PJR	Possible	Moderate	Medium	4A
WANPJR271	Human Settlement	Residential	146 Ziatas Road, Pinjar	146 Ziatas Road, Pinjar	PJR	Possible	Moderate	Medium	4A
WANPJR275	Human Settlement	Residential	16 Perry Road, Pinjar	16 Perry Road, Pinjar	PJR	Possible	Moderate	Medium	4A
WANPJR293	Economic	Agricultural	913 Perry Rd, Pinjar	913 Perry Road, Pinjar	PJR	Possible	Moderate	Medium	4A
WANWN202	Economic	Commercial and Industrial	Caltex, Pinjar Road	2 Hollosy Way, Ashby	WN	Likely	Minor	Medium	4C
WANWN203	Economic	Tourist and Recreational	Ashby Bar and Bistro	141 Pinjar Road, Ashby	WN	Likely	Minor	Medium	4C
WANWN246	Human Settlement	Residential	Kurnalpi Turn	Kurnalpi Turn Singara	WN	Likely	Minor	Medium	4C
WANWN359	Human Settlement	Residential	Lakelands Leisure Village	289 Sydney Road, Gngara	WN	Likely	Minor	Medium	4C
WANWN360	Human Settlement	Residential	303 Sydney Rd, Gngara	303 Sydney Road, Gngara	WN	Likely	Minor	Medium	4C
WANWN361	Human Settlement	Residential	331 Sydney Rd, Gngara	331 Sydney Road, Gngara	WN	Likely	Minor	Medium	4C
WANWN362	Economic	Agricultural	335 Sydney Rd, Gngara	355 Sydney Road, Gngara	WN	Likely	Minor	Medium	4C
WANWN364	Economic	Agricultural	7 Stoney Rd, Gngara	7 Stoney Road, Gngara	WN	Likely	Minor	Medium	4C
WANWN366	Economic	Agricultural	75 Stoney Rd, Gngara	75 Stoney Road, Gngara	WN	Likely	Minor	Medium	4C
WANWN367	Economic	Agricultural	453 Sydney Rd, Gngara	453 Sydney Road, Gngara	WN	Likely	Minor	Medium	4C
WANWN368	Economic	Agricultural	439 Sydney Rd, Gngara	439 Sydney Road, Gngara	WN	Likely	Minor	Medium	4C
WANWN376	Human Settlement	Residential	Fenchurch St, Alexander Heights	Fenchurch Street, Alexander Heights	WN	Likely	Minor	Medium	4C

Asset ID	Asset Category	Asset Sub Category	Asset Name	Location Description	Planning Area	Likelihood	Consequence	Risk Rating	Priority
WANWN377	Human Settlement	Residential	Margate Pl, Marangaroo	Margate Place, Marangaroo	WN	Likely	Minor	Medium	4C
WANWN384	Cultural	Other	ABC Childcare, Banksia Grove	10 Viridian Drive, Banksia Grove	WN	Possible	Moderate	Medium	4A
WANWN385	Cultural	Other	Jehovahs Witness, Banksia Grove	6 Viridian Drive, Banksia Grove	WN	Possible	Moderate	Medium	4A
WANWN389	Human Settlement	Residential	68 Carosa Rd, Ashby	68 Carosa Road, Ashby	WN	Likely	Minor	Medium	4C
WANWN392	Human Settlement	Residential	Morisot Cr, Ashby	Morisot Crescent, Ashby	WN	Likely	Minor	Medium	4C
WANWN398	Human Settlement	Residential	Valley Views Drive, Landsdale	Valley Views Drive, Landsdale	WN	Likely	Minor	Medium	4C
WANWN399	Human Settlement	Residential	Worley CCT, Landsdale	Worley Circuit, Landsdale	WN	Likely	Minor	Medium	4C
WANWN400	Human Settlement	Residential	Amarillo BND, Landsdale	Amarillo Bend, Landsdale	WN	Likely	Minor	Medium	4C
WANWN401	Human Settlement	Residential	Bakana LP, Landsdale	Bakana Loop, Landsdale	WN	Likely	Minor	Medium	4C
WANWN405	Human Settlement	Residential	83 Rousset Rd, Mariginiup	83 Rousset Road, Mariginiup	WN	Likely	Minor	Medium	4C
WANWN412	Human Settlement	Residential	71 Lakeview ST, Mariginiup	71 Lakeview Street, Mariginiup.	WN	Likely	Minor	Medium	4C
WANWN413	Economic	Commercial and Industrial	89 Lakeview ST, Mariginiup	89 Lakeview Street, Mariginiup	WN	Likely	Minor	Medium	4C
WANWN414	Human Settlement	Residential	130 Mariginiup Rd, Mariginiup	130 Mariginiup Road, Mariginiup	WN	Likely	Minor	Medium	4C
WANWN458	Human Settlement	Residential	60 Stoney RD, Gngara	60 Stoney Road, Gngara	WN	Likely	Minor	Medium	4C
WANWN460	Economic	Agricultural	110 Ross ST, Gngara	110 Ross Street, Gngara	WN	Likely	Minor	Medium	4C
WANWN464	Economic	Agricultural	362 Badgerup RD, Gngara	364 Badgerup road, Gngara	WN	Likely	Minor	Medium	4C
WANWN479	Human Settlement	Residential	48 Jambanis RD, Wanneroo	48 Jambanis Road, Wanneroo	WN	Possible	Moderate	Medium	4A
WANWN482	Economic	Agricultural	500 Badgerup RD, Gngara	500 Badgerup Road, Wanneroo	WN	Likely	Minor	Medium	4C
WANWN483	Economic	Agricultural	20-36 Ross ST, Gngara	20-36 Ross Street, Gngara	WN	Likely	Minor	Medium	4C
WANWN510	Human Settlement	Residential	Backshall PL, Wanneroo	Backshall Place, Wanneroo	WN	Likely	Minor	Medium	4C



Asset ID	Asset Category	Asset Sub Category	Asset Name	Location Description	Planning Area	Likelihood	Consequence	Risk Rating	Priority
WANWN512	Economic	Commercial and Industrial	771 Wanneroo RD, Wanneroo	771 Wanneroo Road, Wanneroo	WN	Likely	Minor	Medium	4C
WANWN515	Economic	Agricultural	163 Belgrade RD, Wanneroo	163 Belgrade Road, Wanneroo	WN	Likely	Minor	Medium	4C
WANWN571	Human Settlement	Residential	Andromeda Loop, Landsdale	Andromeda Loop	WN	Possible	Moderate	Medium	4A
WANWN579	Human Settlement	Residential	Frangipani Park	Frangipani Park	WN	Likely	Minor	Medium	4C
WANWNC042	Human Settlement	Residential	Mindarie SE	Gunson Mews Mindarie	WNC	Likely	Minor	Medium	4C
WANWNC045	Economic	Commercial and Industrial	Warman Street	Warman Street Neerabup industrial area.	WNC	Likely	Minor	Medium	4C
WANWNC057	Human Settlement	Residential	Kurrajong Bvd	Kurrajong Bvd Banksia Grove	WNC	Unlikely	Major	Medium	4B
WANWNC058	Human Settlement	Residential	Pinjar Rd NE	Pinjar Rd, Banksia Grove Between Grandis Bvd and Glasshouse Drive	WNC	Likely	Minor	Medium	4C
WANWNC062	Cultural	Other	Ridgewood Park clubrooms	Corner Hester Ave and Ridgewood Bvd, Ridgewood	WNC	Likely	Minor	Medium	4C
WANWNC081	Human Settlement	Residential	Zamia Rise Yanchep	Zamia Rise Yanchep	WNC	Likely	Minor	Medium	4C
WANWNC110	Human Settlement	Residential	3119 Wanneroo Rd	3119 Wanneroo Road Iglinton	WNC	Likely	Minor	Medium	4C
WANWNC118	Human Settlement	Residential	Ornata Bend Banksia Grove	Ornata Bend Banksia Grove	WNC	Possible	Moderate	Medium	4A
WANWNC157	Human Settlement	Residential	Cassilda Park, Two Rocks	Cassilda Way, Two Rocks	WNC	Likely	Minor	Medium	4C
WANWNC163	Human Settlement	Residential	Lady Lindsay Cove, Yanchep	Lady Lindsay Cove, Yanchep	WNC	Likely	Minor	Medium	4C
WANWNC165	Human Settlement	Residential	Lookout Drive, Yanchep	Lookout Drive, Yanchep	WNC	Likely	Minor	Medium	4C
WANWNC170	Human Settlement	Residential	Beachside Parade, Yanchep	Beachside Parade, Yanchep	WNC	Likely	Minor	Medium	4C
WANWNC179	Human Settlement	Residential	Frigate Crescent, Yanchep	Frigate Crescent, Yanchep	WNC	Likely	Minor	Medium	4C
WANWNC180	Human Settlement	Residential	Mullins Way, Yanchep	Mullins Way, Yanchep	WNC	Likely	Minor	Medium	4C
WANWNC186	Human Settlement	Residential	Ocean Drive South, Quinns Rocks	Ocean Drive X Quinns Road, Quinns Rocks.	WNC	Likely	Minor	Medium	4C

Asset ID	Asset Category	Asset Sub Category	Asset Name	Location Description	Planning Area	Likelihood	Consequence	Risk Rating	Priority
WANWNC187	Human Settlement	Residential	Ocean Drive, Quinns Rocks.	Ocean Drive, Quinns Rocks	WNC	Likely	Minor	Medium	4C
WANWNC190	Human Settlement	Residential	Ocean Drive North, Quinns Rocks	Ocean Drive North, Quinns Rocks.	WNC	Likely	Minor	Medium	4C
WANWNC194	Economic	Tourist and Recreational	Quinns Surf Life Saving Club	2 Quinns Road, Quinns Rocks.	WNC	Likely	Minor	Medium	4C
WANWNC197	Human Settlement	Residential	Palermo Court, Merriwa	Palermo Court, Merriwa	WNC	Likely	Minor	Medium	4C
WANWNC200	Human Settlement	Residential	Manasota Approach, Butler	Manasota Approach, Butler	WNC	Likely	Minor	Medium	4C
WANWNC233	Human Settlement	Residential	Newbliss Gardens	Newbliss Gardens, Butler	WNC	Likely	Minor	Medium	4C
WANWNC234	Human Settlement	Residential	Eastwall parkway	Eastwall Parkway, Butler	WNC	Likely	Minor	Medium	4C
WANWNC235	Human Settlement	Residential	Newbliss Gardens /Soran Way	Newbliss Gardens /Soran Way Butler	WNC	Likely	Minor	Medium	4C
WANWNC236	Human Settlement	Residential	Bendenen Ave	Bendenen Ave	WNC	Likely	Minor	Medium	4C
WANWNC251	Human Settlement	Residential	Nightcap CH	Houses on Nightcap CH opposite Planning COM land	WNC	Likely	Minor	Medium	4C
WANWNC252	Human Settlement	Residential	Mooball ST	Mooball ST Yanchep	WNC	Likely	Minor	Medium	4C
WANWNC267	Human Settlement	Residential	181 and 187 Carabooda Road	181 and 187 Carabooda Road	WNC	Likely	Minor	Medium	4C
WANWNC289	Human Settlement	Residential	348 Gibbs Road,	348 Gibbs Road, semi-rural property	WNC	Possible	Moderate	Medium	4A
WANWNC305	Economic	Commercial and Industrial	Two Rocks Marina Shops.	10 Enterprise Ave, Two Rocks	WNC	Likely	Minor	Medium	4C
WANWNC311	Economic	Agricultural	25 Pipidinny Road, Eglinton	25 Pipidinny Road, Eglinton	WNC	Likely	Minor	Medium	4C
WANWNC429	Human Settlement	Residential	Billericay CCT, Butler	Billericay Circuit, Butler	WNC	Likely	Minor	Medium	4C
WANWNC430	Human Settlement	Residential	Oakbank CR, Butler	Oakbank Crescent, Butler	WNC	Likely	Minor	Medium	4C
WANWNC534	Economic	Commercial Forests and Plantations	190 Pederick Rd LAMINATED VENEER LUMBER PLANT	LAMINATED VENEER LUMBER PLANT	WNC	Possible	Moderate	Medium	4A
WANWNC537	Economic	Commercial and Industrial	2048 Wanneroo RD, Neerabup	2048 Wanneroo Road, Neerabup	WNC	Likely	Minor	Medium	4C

Asset ID	Asset Category	Asset Sub Category	Asset Name	Location Description	Planning Area	Likelihood	Consequence	Risk Rating	Priority
WANWNC538	Economic	Critical Infrastructure	Service Station, Neerabup	2056 Wanneroo Road, Neerabup	WNC	Unlikely	Major	Medium	4B
WANWNC541	Economic	Agricultural	2106 Wanneroo Rd, Neerabup	2106 Wanneroo Road, Neerabup	WNC	Likely	Minor	Medium	4C
WANWNC563	Economic	Commercial and Industrial	Amazon Soils	206 Wesco Rd	WNC	Likely	Minor	Medium	4C
WANWNC564	Economic	Commercial and Industrial	1000 Old Yanchep Rd	Quarry north on Hopkins	WNC	Likely	Minor	Medium	4C
WANPJR254	Human Settlement	Residential	18 Spence Road, Pinjar	18 Spence Road, Pinjar	PJR	Unlikely	Moderate	Low	5B
WANPJR255	Economic	Agricultural	110 Ziatas Road, Pinjar	110 Ziatas Road, Pinjar	PJR	Possible	Minor	Low	5A
WANPJR256	Economic	Agricultural	119 Ziatas Road, Pinjar	119 Ziatas Road, Pinjar	PJR	Unlikely	Minor	Low	5C
WANPJR270	Human Settlement	Residential	149 Ziatas Road, Pinjar	149 Ziatas Road, Pinjar	PJR	Unlikely	Minor	Low	5C
WANPJR272	Economic	Agricultural	134 Ziatas Road, Pinjar	134 Ziatas Road, Pinjar	PJR	Unlikely	Minor	Low	5C
WANPJR290	Economic	Agricultural	1941 Old Yanchep Road, Pinjar	1941 Old Yanchep Road, Pinjar	PJR	Unlikely	Minor	Low	5C
WANPJR335	Economic	Agricultural	251 Ziatas Rd, Pinjar	251 Ziatas Road, Pinjar	PJR	Unlikely	Minor	Low	5C
WANPJR336	Economic	Agricultural	229 Ziatas Rd, Pinjar	229 Ziatas Road, Pinjar	PJR	Unlikely	Minor	Low	5C
WANPJR337	Economic	Agricultural	300 Ziatas Rd, Pinjar	300 Ziatas Road, Pinjar	PJR	Unlikely	Minor	Low	5C
WANPJR338	Economic	Agricultural	270 Ziatas Rd, Pinjar	270 Ziatas Road, Pinjar	PJR	Unlikely	Minor	Low	5C
WANWN077	Human Settlement	Residential	61 Ashley Road Tapping	61 Ashley Road Tapping	WN	Unlikely	Moderate	Low	5B
WANWN245	Human Settlement	Special Risk and Critical Facilities	Belgrade Village Retirement	Belgrade Village Retirement Belgrade Road, Sinagra	WN	Possible	Minor	Low	5A
WANWN358	Economic	Commercial and Industrial	149 Badgerup Rd, Wanneroo	149 Badgerup Road, Wanneroo	WN	Possible	Minor	Low	5A
WANWN369	Economic	Agricultural	467 Sydney Rd, Gngara	467 Sydney Road, Gngara	WN	Unlikely	Minor	Low	5C
WANWN388	Human Settlement	Residential	81 Carosa Rd, Ashby	81 Carosa Road, Ashby	WN	Possible	Minor	Low	5A

Asset ID	Asset Category	Asset Sub Category	Asset Name	Location Description	Planning Area	Likelihood	Consequence	Risk Rating	Priority
WANWN569	Economic	Commercial and Industrial	25 Fellowship RD	25 Fellowship RD	WN	Possible	Minor	Low	5A
WANWNC001	Human Settlement	Special Risk and Critical Facilities	Butler College	15 McCormack, Quinns Rocks	WNC	Possible	Minor	Low	5A
WANWNC080	Human Settlement	Residential	Parktree Ave Yanchep	Parktree Ave Yanchep	WNC	Possible	Minor	Low	5A
WANWNC173	Human Settlement	Residential	Parkside Street, Yanchep	Parkside Street, Yanchep	WNC	Unlikely	Minor	Low	5C
WANWNC174	Human Settlement	Residential	Waveski Street, Yanchep	Waveski Street, Yanchep	WNC	Unlikely	Minor	Low	5C
WANWNC313	Economic	Agricultural	19,29 Karoborup RD Farm	Karoborup Rd South x Wanneroo RD	WNC	Possible	Minor	Low	5A
WANWNC321	Human Settlement	Residential	231+232 Carabooda Road	Semi-Rural properties on Carabooda Road	WNC	Unlikely	Moderate	Low	5B
WANWNC333	Economic	Agricultural	19 Taronga Pl, Eglinton	19 Taronga Place, Eglinton	WNC	Possible	Minor	Low	5A
WANWNC334	Human Settlement	Residential	20 Taronga Pl, Carabooda	20 Taronga Place, Carabooda	WNC	Possible	Minor	Low	5A
WANWNC426	Economic	Tourist and Recreational	Dizzylamb Park	414 Karoborup Road, Carabooda	WNC	Possible	Minor	Low	5A
WANWNC535	Economic	Agricultural	Trandos Rd	Trandos Rd	WNC	Possible	Minor	Low	5A

## Multi-Agency Work Plan – Local Government Wide Controls

Control	ID	Action/Activity Description	Lead Agency	Partners	Application		Status	Implementation Notes
					Targeted	Period		
Risk Analysis		BRM Plan extreme risks priority for treatment	DFES	LG, DBCA, DFES Service Providers	Y	1	Complete	Treatments planned for all extreme risks and including in BRM Plan Treatment Schedule.
		Maintain and refine BRM Plan	DFES	LG	Y	All	Ongoing	As per Westplan Fire a collaborative approach between LG, P&W & DFES
		COW Bush Reserves Risk Assessment	LG	-	Y	Ongoing	Annual	Prescribed burning, firebreaks install and upgrade
Bush Fire Act 1954 S.33		Annual Firebreak Notice published	LG	-	N	All	Ongoing	Published annually.
		Review of annual firebreak notice	LG	-	N	1	Completed	Review to improve adequacy of control. Approved 2018 - Gazetted date change to 1 November annually.
		Annual firebreak notice inspections	LG	-	Y	2	Annual	Level of non-compliance to inform BRM Plan context and vulnerability assessments (human settlement assets).
		Review and update times as required for Prohibited Burn and Restricted Burn Times.	LG	-	N	Ongoing	Ongoing	Local Government may alter prohibited and restricted burning times, based on seasonal conditions.
Emergency Management Act 2005		Local Emergency Management Arrangements	LG	-	Y	Ongoing	Ongoing	Local Government to ensure LEMA for emergency management in the district are prepared.
Planning		Planning in bushfire prone areas E.g. State Planning Policy 3.7	WAPC	LG, Land Owners	N	Ongoing	Ongoing	Foundation for the implementation of effective, risk-based land use planning and development. The City aligns its planning policies and standards to SPP 3.7
		Bushfire Management Plans	LG	Land	-	Ongoing	Ongoing	Implementation of effective, risk-based-

Control	ID	Action/Activity Description	Lead Agency	Partners	Application Targeted	Period	Status	Implementation Notes
				Owners				based land use planning and development.
Community Engagement		DFES Community Engagement Initiatives/programs, DFES Monthly themes	DFES	LG	N	Ongoing	Ongoing	Monthly themes promoted over social media
		Community Bushfire Ready Groups (preparedness, education and information)	LG	DFES	N	Ongoing	Ongoing	2 Bushfire Ready Facilitators are in the City working together with LG and DFES Community Engagement, to educate the community on bushfire events
Reduction of Ignition Sources		Western Power Bushfire Management Plan	Western Power	-	Y	Ongoing	Ongoing	Annual vegetation management, asset inspections and maintenance are completed to ensure risk is managed
Fuel Management		Fuel reduction of UCL/UMR	DFES	LG	Y	Ongoing	Ongoing	Engage Fire Mitigation Contractors and Bush Fire Brigades as required for fuel reduction
		Park and Wildlife burn program	DBCA					CS & EM Team and PaW collate burn programs
		Mitigation of Main Roads verges & lands	Main Roads	-	Y	Ongoing	Ongoing	MRWA work includes, slashing, spraying, mulching, pruning and other mechanical treatments
		Mitigation of ADF bushland	ADF	-	Y	Ongoing	Ongoing	<i>To be advised</i>
		City of Wanneroo annual works program	LG	-	N	Ongoing	Ongoing	Work includes, burning, slashing, spraying, mulching, pruning and other mechanical treatments
		City of Wanneroo LG Reserves Plan, including Prescribed Burning	LG	-	Y	3	Ongoing	CS & EM Team and Bushfire Mitigation Contractors working through sites.
		Bushfire Brigade Prescribed Burning	LG	-	Y	Ongoing	Annual	Engaged to reduce fuels on private property as required
		Fuel Reduction, asset protection zones, hazard separation zone.	Private Land Owner	-	N	2	Ongoing	Fuel reduction undertaken by private land owner to comply with Firebreak Notice

