



Community Safety –  
Fire and Emergency Management

# Post-Season Summary Report

## 2020/2021



Version control of this document is managed by the Fire and Emergency Management team.

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## DISCLAIMER

All data and information in this report is provided in good faith and makes no representation or warranty regarding its accuracy, availability, or completeness. This document is not intended to be operational in nature and all agencies are responsible for undertaking prevention, preparedness, response, and recovery plans and/or strategies in their own capacities.

## ACKNOWLEDGEMENT

The local government fire season is indicative of the declaration made under sections 17, 18 and 33 of the *Bush Fires Act 1954*, *Bush Fires Regulations 1954*, and all authorisations for local government to modify such dates determined by local conditions. Commonly, fire seasons across the Perth Metropolitan commence each year from 1 October and conclude 31 May the following year.

The summary acknowledges external agencies that through their media platforms and documentation have contributed to expand the context surrounding the local data captured for the City of Kalamunda.

## ACRONYMS & ABBREVIATIONS

AIDR	Australian Institute Disaster Resilience
BNHCRC	Bushfire Natural Hazards Cooperative Research Centre
BoM	Bureau of Meteorology
BRG	Bushfire Ready Group
BRMS	Bushfire Risk Management System
CESM	Community Emergency Services Manager
COVID 19	Coronavirus Disease 2019
CSIRO	Commonwealth Scientific and Industrial Research
DFES	Department of Fire and Emergency Services
EM	Emergency Management
FDR	Fire Danger Rating
KBDI	Keech Byram Drought Index
NERAG	National Emergency Risk Assessment Guidelines
PPRR	Prevention, Preparedness, Response and Recovery
PR	Public Relations
SDI	Soil Dryness Index

## SUPPORTING MATERIAL

2020/2021 Fire Hazard Assessment Plan

2020/2021 Fire Hazard Reduction Notice

Kalamunda Bushfire Community Engagement & Communication Plan 2020/2021

City of Kalamunda Advancing Community Strategies

City of Kalamunda Risk Matrix 2019

Department of Fire and Emergency Services

Bureau of Meteorology

Emergency WA

Australian Disaster Resilience Knowledge Hub

CSIRO

Bushfire Natural Hazards CRC

*Bush Fires Act 1954 & Bush Fires Regulations 1954*

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## PURPOSE

The purpose of this report is to provide a comprehensive summary of the City of Kalamunda's (the City) bushfire compliance outcomes from 1 October 2020 to 31 May 2021 (the fire season). This report was developed to expand on the City's prior documentation by including all elements of bushfire compliance and efforts toward bushfire preparedness.

## AIM

This report aims to analyse the data collected throughout the local 2020/2021 bushfire season in order to develop stronger engagement plans, more targeted communication strategies, and to review compliance procedures under the authority of the *Bush Fires Act 1954* (the Act) and *Bush Fires Regulations 1954*.

The report will also aim to examine the inherent impacts of COVID-19 on the City's plans and arrangements for bushfire safety and compliance.

## SCOPE

The report will refer to specific data collected from the City's internal corporate systems for the following.

- Permits to burn.
- Illegal burns.
- Fire hazard assessments.

The report will also refer to information gathered through observations of local weather conditions and external agency communications on local bushfire emergencies, fire bans and COVID-19.

## CONTEXT

The report has been developed to align with the City's following strategic objectives (table 1) along with the 2019 Lesson Management Cycle produced by the Australian Institute for Disaster Resilience (figure 1).

PRIORITY 1: Kalamunda Cares and Interacts		
Objectives	Strategies	Success Management
1.1 To be a community that advocates, facilitates, and provides quality lifestyles choices.	1.1.1 Facilitate the inclusion of the ageing population and people with disability to have access to information, facilities, and services.	<ul style="list-style-type: none"> <li>• Increase number of community education events.</li> </ul>
	1.1.2 Empower, support, and engage and with young people, families, and our culturally diverse community.	
1.2 To provide safe and healthy environments for community to enjoy.	1.2.1 Facilitate a safe community environment.	<ul style="list-style-type: none"> <li>• Increasing community perception of safety in the City.</li> <li>• Increasing compliance with fire protection requirements.</li> <li>• Increasing level of satisfaction with programs, facilities, and activities.</li> </ul>

PRIORITY 4: Kalamunda leads		
Objectives	Strategies	Success Management
4.1 To provide leadership through transparent governance.	4.1.1 Provide good governance	<ul style="list-style-type: none"> <li>• Level of compliance with legislation.</li> <li>• Increasing satisfaction with community engagement activities.</li> <li>• Level of external funding acquired.</li> </ul>
4.2 To proactively engage and partner for the benefit of community.	4.2.1 Actively engage with the community in innovative ways.	
	4.2.2 Increase advocacy activities and develop partnerships to support growth and reputation.	

**Table 1:** Kalamunda Advancing 2027 Strategic community plan objectives.



**Figure 1:** Lessons management cycle (AIDR, 2019).

Risk management as defined by the Australian Institute of Disaster (1998) involves the application of policies, procedures and practices that assist in analysing, evaluating, treating, and monitoring risk. In an environment full of uncertainty managing risk assists all agencies to identify and protect what people and communities' value.

The context of risk assessment in this report aligns with the National Emergency Risk Assessment Guidelines (NERAG) ISO 31000:2018 and the City's risk matrix (figure 2) and is scaled to the consequences and likelihoods relevant to the City's administrative and operational capacity.

It also includes the risk of impact directly to people and community aligning with DFES's strategic control priorities 2016-2028. These are:

- Protection and preservation of life.
- Community warnings and information.
- Protection of critical infrastructure and community assets.
- Protection of residential property.
- Protection of assets supporting individual livelihood and community financial sustainability.
- Protection of environmental and heritage values.

The risks in this report are focused on bushfire; one of the City's highest risks to its community. The assessments provided in this report will identify current and emerging hazards allowing for organisational growth and improvement, particularly where preservation of life is a critical objective.

Audit & Risk Committee Meeting - 19 March 2019 Attachments  
[Risk Matrix](#)

Attachment 9.1.4.3

## CITY OF KALAMUNDA RISK MATRIX 2019

CONSEQUENCE							LIKELIHOOD					
							< once in 15 years May occur, only in exceptional circumstances	At least once in 10 years Could occur at some time	At least once in 3 years Should occur at some time	At least once per year Will probably occur in most circumstances	More than once per year Expected to occur in most circumstances	
Financial	Health & Safety	Reputation	Operation	Environment	Compliance	Project	Severity	Rare E	Unlikely D	Possible C	Likely B	Almost Certain A
>\$1M	Fatality or permanent disabling injuries or illness	Substantiated, public embarrassment, very high multiple impacts, high widespread multiple news profile, third party actions	Non-achievement of major deliverables	Major breach of legislation or extensive contamination and environmental damage requiring third party intervention	Breach resulting in external investigation or third party actions resulting in significant tangible loss and damage to reputation	>50% increase in cost or timeline, or inability to meet project objectives requiring the project to be abandoned or redeveloped	Critical	Medium	High	High	Extreme	Extreme
\$500,000 - \$1M	Serious irreversible injuries or illness	Substantiated, organisational embarrassment, high impact news profile, third party actions	Non-achievement of major deliverables	Minor Breach of legislation / significant contamination or damage requiring third party assistance	Breach resulting in external investigation or third party actions resulting in tangible loss and some damage to reputation	20 – 50 % increase in time or cost or significant variation to scope or objective requiring restructure of project and Senior Management or Council approval	Major	Low	Medium	High	Extreme	Extreme
\$100,000 - \$500,000	Injuries or illness that could lead to a Lost Time Injury	Substantiated, public embarrassment, moderate impact, moderate news profile	Significant delays to major deliverables	Environmental damage requiring restitution or internal clean up	Breach requiring internal investigation, treatment or moderate damage control	10 - 20 % increase in time or cost or variation to scope or objective requiring Senior Management approval	Significant	Low	Medium	High	High	High
\$10,000 - \$100,000	Medical treatment injury or illness	Substantiated, low impact, low news item	Inconvenient delays	Minor damage or contamination	Breach of policy, process or legislative requirement requiring attention of minimal damage control	5-10% increase in time or cost or variation to scope or objective requiring managers approval	Moderate	Low	Low	Medium	Medium	High
< \$10,000	First aid treatment injury or illness	Unsubstantiated, low impact, low profile or "no news" item	Little impact	Little impact	Minor breach of policy, or process requiring approval or variance	Small variation to cost, timelines, scope or quality of objectives and required outcomes	Insignificant	Low	Low	Low	Low	Medium

City of Kalamunda

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Figure 2: City of Kalamunda Risk Matrix 2019.

## EXECUTIVE SUMMARY

This report covers the City's bushfire compliance outcomes including achievements, limitations, and recommendations. The report will also summarise local conditions experienced that resulted in bushfire emergencies, local fire bans and other weather conditions, and that impacted on compliance duties such as permits to burn and fire hazard assessments.

The 2020/2021 local bushfire compliance season was a considerable improvement on the previous 2019/2020 season. It resulted in greater compliance outcomes and bushfire safety across permits, communications, fire hazard assessments and illegal burning activity\*. The season introduced several applications and strategies to assist in improving its capability across bushfire safety and compliance. The City successfully provided and executed the Bushfire Community Engagement and Communication Plan. This plan was developed to enhance education and awareness toward bushfire preparedness and can be reviewed in the separate summary report. The fire hazard assessment application Zoodata was developed and implemented resulting in significant improvement for evidence gathering and operation for fire hazard assessments. Officer training refresher modules and field guides were introduced including field books for the local fire brigades to assist gathering evidence when attending illegal burns.

### PERMITS TO BURN

Bushfire safety improvements in relation to permits to burn shows a 46.5% increase (excluding City and State land) compared to last season. This may indicate that permit holders are actively aiming to reduce fuel loads to improve property preparedness. Majority of permits were issued at the commencement of the restricted period with 123 permits issued across October and November 2020. Bickley, Pickering Brook, and Kalamunda were recorded with the most permits shown on page 22.

### ILLEGAL BURNS

Majority of illegal burning activity occurred toward the end of the restricted burning period (April to May 2021) with Kalamunda, Lesmurdie, and Wattle Grove reporting the most breaches as indicated on page 28.

95% of all illegal burns were a result of failing to obtain a burning permit, therefore these areas will be considered for a more targeted engagement approach in burning requirements and bushfire safety. The City this season also improved its collaboration and communication with the local fire brigades offering field books that aid in gathering evidence on illegal burning activity outside office hours, particularly around repeat offenders.

\*Indicative of reported burns to a City Fire Officer.

**FIRE HAZARD REDUCTION NOTICE**

The Fire Hazard Reduction Notice (the Notice) this season received an update to its design, aiming to improve its readability as displayed on page 35.

**VARIATIONS**

A requirement of the Notice is to have variations submitted prior to 1 October in preparation for the start of assessments that commence from 1 November. 136 applications were received and approved, an improvement of almost 16%.

**TRAINING & STAFF**

Three full time casual officers were hired and commenced 19 Oct 2020 and finished 5 Feb 2021. Three (3) hire vehicles were also obtained to provide a safe and effective means to assess fire breaks.

**FIRE HAZARD ASSESSMENTS**

Fire hazard assessments also achieved significant outcomes with 4077 properties assessed and a compliant result of 2844 properties: a 6.5% increase from last season. This was largely due to the new Zoodata assessment application and its stability.

During fire hazard assessments 3.9% (161) of properties were inaccessible due to locked gates or other access restrictions, however less than 1% of these properties remained inaccessible for a fire hazard assessment to be completed.

**WORK ORDERS**

Assessment outcomes indicated across pages 40 show 1001 work orders were issued: a decline of 17.7% from last season.

With the increase of follow up assessments completed 325 work orders remained outstanding (not followed up) at the season's conclusion compared to 784 from last season. This is a significant improvement of 82.7%. Majority of work orders issued, as seen on page 41, and comparative to the total properties assessed, were across the foothills. The total of work orders visible on page 43 indicates residents were non-compliant against the requirements for dead grasses, fire breaks and additional works.

**ENFORCEMENT**

For Fire Hazard Assessments, enforcement measures took place only after a follow up assessment was conducted and 83 infringements were issued as a result. This 76% increase was due to the increased amount of follow up assessments conducted outlined in figure 15 on page 40. The City this season engaged a contractor to install and upgrade fire breaks after several attempts to engage with the owner. The property located in Paulls Valley has recorded three seasons of non-compliance against the Notice and with a risk rating under the Bushfire Risk Management System (BRMS) of extreme, action was required. Fire breaks are required for access, for the ability to conduct safer firefighting operations and can in some conditions slow the rate of spread of bushfires. It was therefore considered important that upgrading and installing fire breaks on this property were carried out.



### COVID-19 IMPACTS

This bushfire compliance season experienced a moderate impact from the restrictions imposed by COVID-19. It did require processes and plans to pivot in order to meet State restrictions, such as residents self-isolating, permit restrictions, working from home and postal delays. Payment plans were also introduced for infringements issued under the Bush Fires Act 1954. Two lockdowns occurred over the bushfire season which impacted on permit holders and completing fire hazard assessments.

### BUSHFIRES AND FIRE WEATHER

A total of 14 bushfires that reached an emergency warning level near the City and within the Metro area were recorded. Further details are tabled on page 15. A total of 20 Total Fire Bans were recorded across the season with 10 days recorded at a severe fire danger rating (FDR). These conditions can have a significant impact on residents' ability to conduct works and outlines the importance of having properties prepared early.

### ORDINARY COUNCIL MEETING

[23 March 2021]

Council REQUEST the Chief Executive Officer to:

Seek quotes from external auditors to undertake an audit of the City's Fire Hazard Mitigation practices including but not limited to.

- a) Current funding allocation
- b) Community engagement strategy/s
- c) Community education packages
- d) Staff training package
- e) Efficacy of timing and method of issuing Fire Hazard reduction Notices and other communications to residents
- f) Benchmarking against the City's practices against other similar local governments (i.e., Cities of Armadale, Wanneroo and Swan, and Shires of Mundaring and Chittering).

Motion lost 4/8. Refer to details in appendix 1, page 50.

Although the motion was lost, the City has considered the above as part of this review and in preparation of the 2022/2021 bushfire preparedness planning.

### KEY RECOMMENDATIONS

- Improving community engagement for targeted areas including messaging and events.
- Increased resources and training opportunity for newly recruited staff over the bushfire season with particular focus on fire hazard assessments. This can allow time for more practical exposure in communication, customer service and engagement with local residents and local knowledge.
- Continuous review and risk assessment on processes, plans, policies, and strategies for bushfire compliance.

## LOCAL BUSHFIRE SEASON SUMMAR

Conditions across the 2020/2021 fire season were influenced by the La Niña weather pattern (Bushfire & Natural Hazards CRC, 2020) introducing higher than average rainfalls and above average temperatures (BoM, 2020). This resulted in a vastly different climate than the previous two reported bushfire seasons.

The weather conditions allowed for the restricted and prohibited fire season to commence from 1 October 2020 and conclude 31 May 2021 requiring no extension or retraction of dates as witnessed from other local governments. Environmental conditions presented some restrictions in the burning period of the season, particularly in April 2021 where issuing of permits to burn were delayed due to the soil dryness as indicated in figure 3.

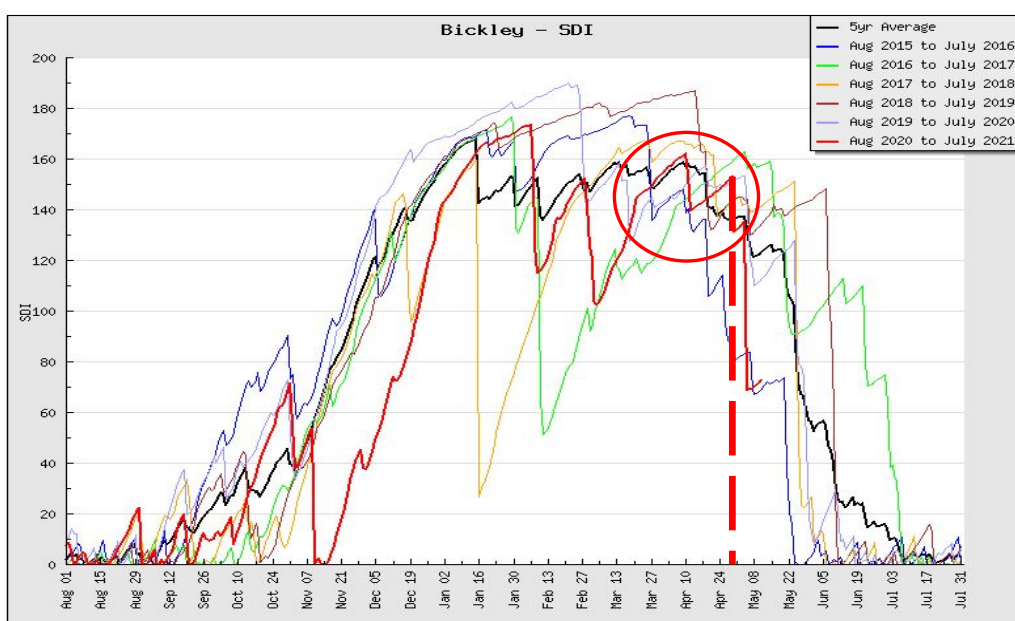


Figure 3: Soil Dryness Index (SDI) comparative to the 5-year average (BoM, 2021)



### OCTOBER TO NOVEMBER – Restricted burning period

The start to the restricted bushfire season remained relatively dry however was followed by a record wet November (figure 4) recording approximately 310mm – 350mm of rain in the Perth Hills (BoM, 2020). The impact of this rainfall across bushfire compliance, particularly around fire hazard assessments, was considered moderate. A total of 553 work orders were issued in November resulting in an increase of 24.3% from last season. This may have been a result of increased vegetation growth and limited ability to upgrade or install fire breaks, slash grasses due to the effects of increased rainfall. It is however expected that property owners and/or occupiers are prepared prior to the start of the bushfire season and under the Fire Hazard Reduction Notice which is distributed in July. The continued messaging and engagement activities provided by local and state agencies on preparing properties against bushfire threats provides ample opportunity to owners and residents to have plans in place.

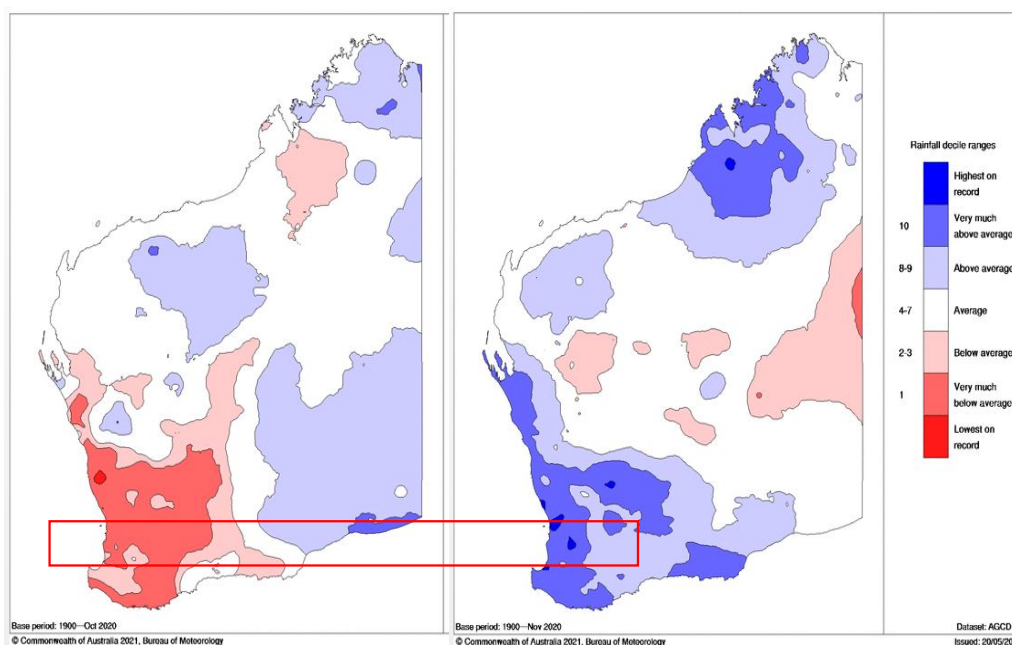


Figure 4: Western Australia October and November 2020 rainfall decile ranges.

The data captured for permits to burn (page 21) indicates that residents took advantage of the drier conditions in October 2020 in an attempt to reduce fuel loads with a total of 79 permits to burn issued followed by a total of 44 in November: a 37.5% increase from the previous season. This increase in burning activity consequently meant some residents conducted burns without following the regulations equalling a total of 13 illegal burns attended to by City fire officers. These burns were spread across the top of the escarpment and the foothills\*.

\* Illegal burn data reflects fires that City officers were made aware of and does not reflect the total number of fires that have occurred within the City of Kalamunda.

**DECEMBER – MARCH – Prohibited burning period**

Commencing 1 December 2020 to 31 March 2021 the prohibited burning period was declared. During this period, a total of eleven (11) illegal burns were attended to by a City Fire Control Officer, majority of which occurred in the foothills (pg. 27). Recorded notes of these burns were the result of residents burning rubbish or a disregard for the burning dates and risk to community.

A total of 20 declared Total Fire Bans (TFB) with ten (10) days over the season rated a severe fire danger rating (FDR). Majority of the Total Fire Bans occurred during February (Table 2).

	Total Fire Bans	Very High FDR	Severe FDR	Property work orders
October	0	0	0	N/A
November	0	1	0	553
December	5	9	3	289
January	5	17	4	199
February	7	5	3	32
March	1	3	0	11
April	2	2	0	N/A
May	0	0	0	N/A

**Table 2:** Local bushfire conditions and work orders issued during these times.

The TFBs between December and February prohibited the use of certain equipment, which in turn may have inhibited ongoing maintenance that residents had planned for bushfire preparedness on their property or being able to action and complete work orders. It is therefore crucial that major works such as fire breaks, fuel loads and slashing are completed prior to the high threat period and dangerous weather conditions increase the risk of severe bushfires and Total Fire Bans.

It should also be noted that December experienced hot and dry conditions recording four consecutive days above 36°C. The hottest day reached 40°C with steady east/north-east winds and gusts of up to 70km/h across those three days (BoM, 2020). These conditions contribute significantly to dangerous fire behaviour meaning it is in this period that landowner/s and or occupiers should already have in place bushfire plans and have their properties well prepared. During these conditions, a total of 531 properties had been work ordered for fire hazards needing action, a drop of almost half (40.6%) from last season. This may have been a result of the black summer fires and local bushfire emergencies in Lesmurdie and Forrestfield 2019/2020.

January's conditions were similar with temperatures well over 36°C for three consecutive days including severe fire danger ratings, consistent north-easterly 25-40km/h winds and a fire weather warning issued by BoM (BoM, 2021).

The City's Fire and EM team recorded thirteen (13) bushfires across 11 local governments in close proximity (under 1 hour), or that lasted more than 1 day and reached an emergency warning alert level.

**DECEMBER**

City of Swan	Bullsbrook	24/12/2020
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**JANUARY**

Shire of Gingin	Red Gully Moore River	02/01/2021 18/01/2021
Shire of Northam	Wundowie	02/01/2021
City of Gosnells	Gosnells	03/01/2021
City of Kwinana	Kwinana	03/01/2021
City of Rockingham	Rockingham	04/01/2021
City of Cockburn	Bibra Lake	12/01/2021
Shire of Mundaring	Beechina	15/01/2021
City of Kalamunda	High Wycombe	15/01/2021
Shire of Serpentine/Jarrahdale	Oakford	16/01/2021

**FEBRUARY**

City of Swan	Gidgegannup Brigadoon Upper Swan (Walyunga NP, Bells Rapids, Ellen Brook Nature Reserve)	01/02/2021
Shire of Mundaring	Wooroloo	01/02/2021

Majority of these bushfires occurred over January including the emergency warning alert bushfire at Hawkevale reserve in High Wycombe. The following summary shows a snapshot of the impact it had.

- 31°C day
- Reported at 11:35am and by midday was at an emergency warning.
- 30-40km/h easterly winds.
- 80-90km/h gusts easing in the afternoon.
- Ember attack causing damages to fence and gutters.
- Approximately 70 firefighters in attendance (DFES, Kalamunda Bushfire Brigade, DBCA).
- WAPOL in attendance and assisting with road closures, safety, and investigations.
- Air support was dispatched for waterbombing efforts (fixed wing and helitak aircraft).
- Bushfire burnt 4 hectares in under an hour and totalled an area of 6 hectares.
- Fire was reported as suspicious and undergoing investigation with WAPOL.

This bushfire highlighted the intensity and unpredictable nature of bushfires across all landscapes, including built up urban areas. It also highlights that all residents regardless of where they live be prepared for the unexpected emergency they may face.





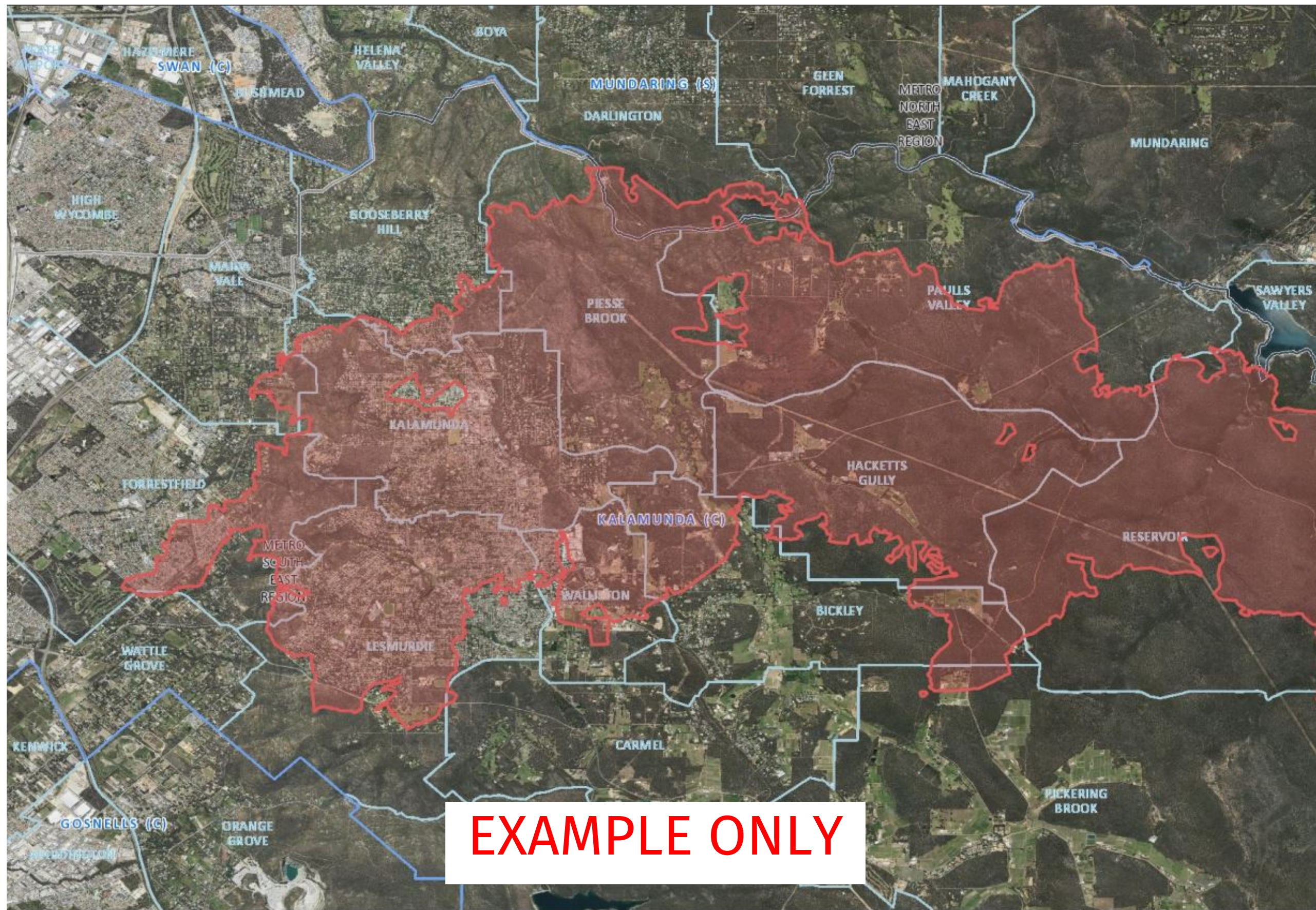
Photo credit: Reddit u/78Monk

In February, the Perth Hills experienced one of its worst bushfire emergencies impacting our neighbouring local governments City of Swan and Shire of Mundaring. Operations lasted a month including three (3) evacuation centres operating before the recovery efforts were handed over to the local governments.

The bushfire occurred on a day declared a Total Fire Ban and started as a result of a structure fire in Wooroloo. It impacted a total area of 10750 hectares (156km perimeter) and moved at an incredible rate of spread covering 26km in just three (3) days. 86 homes were lost with an additional 320 properties damaged and highlighted the unpredictability of such conditions that created the “perfect storm” lasting roughly five (5) days in a state of uncontained and uncontrolled.

Should a bushfire of the same magnitude occur in the City of Kalamunda the impacts would be catastrophic. An example of the Wooroloo fire scar has been overlayed to provide visual context of the extent of impact a bushfire such as that experienced by the Shire of Mundaring and City of Swan can have.











#### APRIL – MAY – Restricted burning period

As the City moved out of its prohibited burning period and back into the restricted burning period fire hazard assessments had concluded and permits to burn required.

Due to the soil dryness index (figure 3) permits to burn were delayed in April and commenced April 16. Burning 1m<sup>3</sup> garden piles was still permitted between 6pm – 11pm. Permits to burn were also mildly impacted by COVID-19 restrictions where a three-day lockdown was imposed, suspending all permits issued over this period.

Fire hazard assessments ran successfully this season commencing 1 November and concluding 31 March. A total of 4077 properties were visited for fire hazard assessments with 1001 work ordered and a final total of 2844 properties deemed compliant at the season's conclusion an improvement of 6.5%. A significant increase of properties this season were also followed up due to the implementation of the Zoodata assessment application. Residents however did experience delays in getting some works done, such as fire breaks, due to inclement weather conditions that caused fire bans and severe fire danger days and COVID-19 impacts to postal deliveries.

Two days in April were recorded as a Total Fire Ban. This was a result of the incoming Cyclone Seroja which would pull significant resources.



Figure 5: Cyclone Seroja trajectory.

## 1. COMMUNITY ENGAGEMENT

### 1.1 Summary/background

The City's bushfire engagement and communication plan was developed and facilitated in collaboration with the City's PR and Customer Relations team. Several events were planned across September and October providing all residents the opportunity to improve, learn and build on existing knowledge of bushfire preparedness including requirements under the Fire Hazard Reduction Notice. This season also saw the release of DFES's Burn SMART campaign and the legislated Bush Fire Risk Treatment Standards associated guide to applying them.

The following stakeholders were involved in local engagement presentations, attendance, support, and planning.

- DFES staff.
- City of Kalamunda Fire officers.
- Bushfire Ready Group coordinators.
- Kalamunda volunteer bushfire brigade members.
- Kalamunda volunteer fire and rescue Service members.
- Welshpool and Midland Fire and Rescue Service

Several face-to-face events were held across the City targeting property preparedness, personal preparedness and burning education.

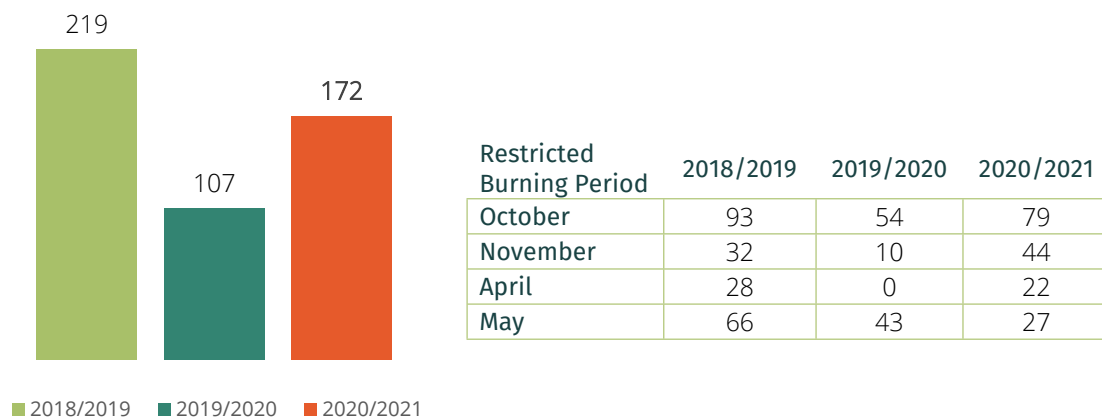
Outcomes from the 2020/2021 bushfire community engagement and communication plan can be reviewed in the subsequent summary report.



## 2. PERMITS TO BURN

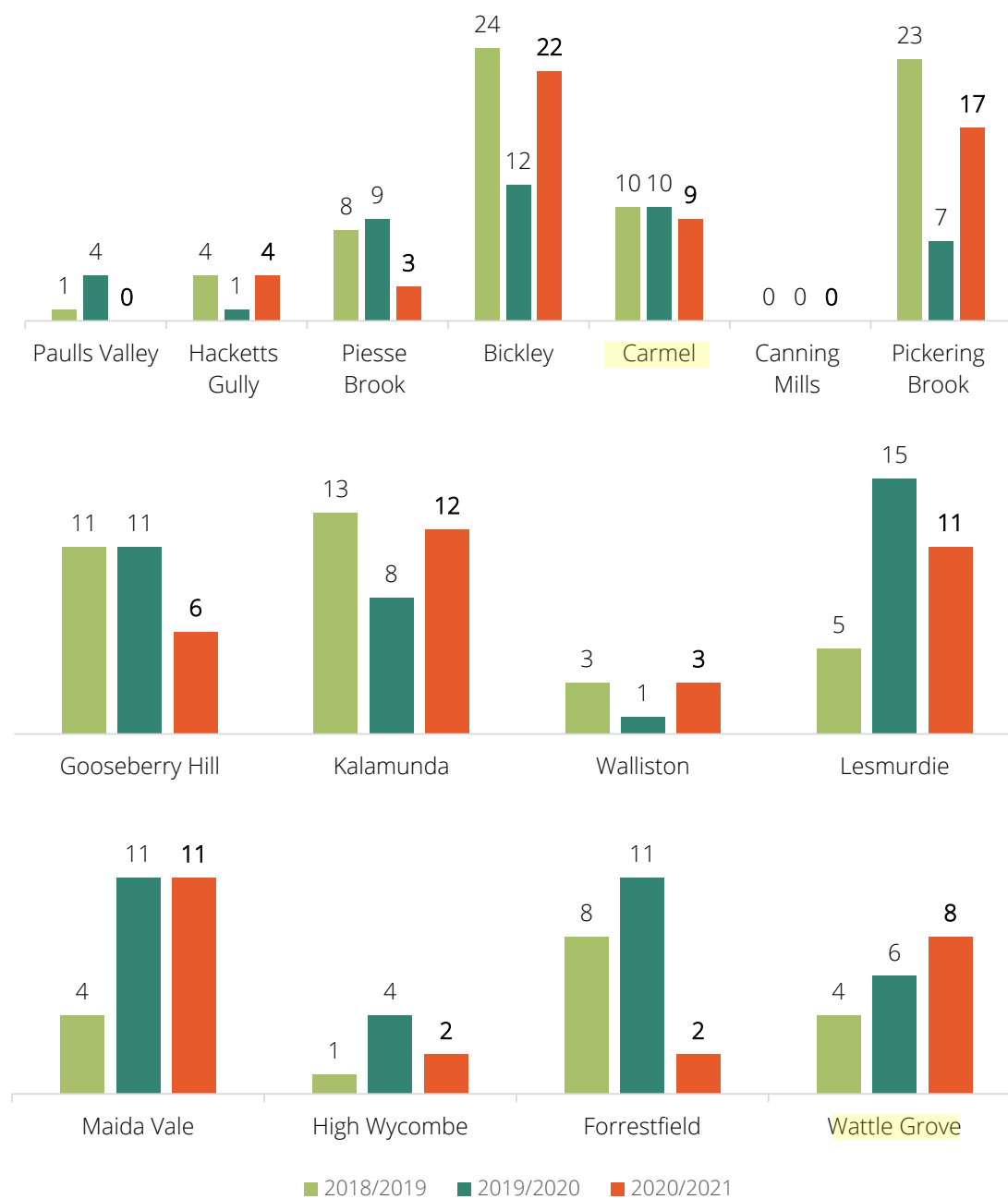
### 2.1 Outcomes

This section is reflective of the restricted burning period that commenced 1 October 2020 to 30 November 2020 and commenced again from 1 April 2021 until 31 May 2021.



**Figure 6:** Graph showing total permits to burn issued (excluding City and State land). The table displays total permits to burn issued across the restricted burning period.

- 172 permits were issued across the restricted burning period (46.5% increase).
- Issuing permits to burn was delayed until 16 April 2021 due to
- Permits were suspended in April 2021 due to the COVID-19 three (3) day lockdown.
- Majority of permits issued were across Pickering Brook, Bickley, and Kalamunda Figure 7).
- Carmel looks to be maintaining a steady trend in permit burning activity.
- Wattle Grove looks to be increasing their permit burning activity which may be a combination of the community engagement events and the increase of non-compliant fire hazard assessments for fuel loads (Table 8, page 44).
- Issuing permits to burn was delayed until 16 April 2021 due to COVID 19 restrictions.
- Burning activity during the restricted burn period suggests that landowners and residents are actively looking to reduce fuel loads and maintain property preparedness. This is evident also in the work orders issued with less than a quarter required to reduce dead flammable material (fuel load). It is unknown how many 1m<sup>3</sup> pile burns occurred between 6pm to 11pm, contributing further to fuel load management as permits are not required in this instance.
- Due to COVID-19 lockdowns and restrictions issuing permits in April 2020 (previous bushfire season) were suspended. This led the assumption that an increase in burning activity and permit requests would occur at the start of the 2020/2021 season.
- As COVID-19 restrictions are eased and removed and continuous messaging, engagement and education is provided, it can be predicted that the number of permits issued will increase next season.



**Figure 7:** Permits to burn issued across the Eastern Rural District, Escarpment and Foothills.



## 2.2 Recommendations and Risk Assessments

From this data it can be identified that a need to provide continuing education and awareness of bushfire safety, property preparedness and permit regulations and requirements to all residents, with a targeted approach to those areas that display an increase in burning activity. This can be achieved through collaboration with the City's PR and Customer Relations team to continually develop the Bushfire Engagement and Communication Plan. It is also recommended that continuous skill refreshers and training modules be developed and made available to the City's fire officers to ensure currency and competency of skills and knowledge surrounding bushfire compliance.



<b>HAZARD/RISK</b>			
City fire officers fail to assess burn piles prior to issuing a permit resulting in rubbish and other toxic materials being burnt by residents.			
	<b>UNTREATED RISK</b>		
	<b>Consequence</b>	<b>Likelihood</b>	<b>Rating</b>
<b>Health &amp; Safety</b>	Significant	Likely	High
<b>Reputation</b>	Significant	Almost certain	High
<b>Environment</b>	Significant	Likely	High
<b>Compliance</b>	Significant	Likely	High

#### TREATMENTS

- Develop a local information guide on permits that includes what can and cannot be burnt.
- All burn piles prior to issuing a permit be assessed to ensure materials not permitted to be burnt are removed.
- Permits are not issued until compliance is achieved as per the *Bush Fire Regulations 1954* and any additional requirements placed by the fire officer.
- Every permit request is logged in the internal systems and followed up by an officer to organise a time for burn pile assessment.
- Processes are reviewed and maintained prior to and after each burning permit season.
- Consider the implementation of capturing photos and assessment outcomes from a portable device while on site to improve evidence gathering methods.
- r.15B under the *Bush Fires Regulations 1954* are printed on the back of every permit issued by an authorised City fire officer.

	<b>TREATED RISK</b>		
	<b>Consequence</b>	<b>Likelihood</b>	<b>Rating</b>
<b>Health &amp; Safety</b>	Significant	Unlikely	Medium
<b>Reputation</b>	Moderate	Unlikely	Low
<b>Environment</b>	Significant	Unlikely	Medium
<b>Compliance</b>	Moderate	Unlikely	Low

<b>HAZARD/RISK</b>			
Permits to burn are obtained online only resulting in no pile assessment, no fire officer consultation and full reliance on community self-compliance.			
	<b>UNTREATED RISK</b>		
	<b>Consequence</b>	<b>Likelihood</b>	<b>Rating</b>
<b>Health &amp; Safety</b>	Critical	Possible	High
<b>Reputation</b>	Major	Likely	Extreme
<b>Environment</b>	Critical	Likely	Extreme
<b>Compliance</b>	Significant	Likely	High

#### TREATMENTS

- Process is in place for all burn piles to be assessed by a City Fire officer prior to the permit being issued.
- Process is reviewed prior to and after each bushfire season with any updates communicated to all community safety staff.
- Provide refresher training for staff on permits and fire behaviour to improve and maintain confidence in issuing permits.
- Permits to burn garden refuse are issued by City Fire Officers and Rangers in compliance with r.15B of the *Bush Fires Regulations 1954*.
- Regulation 15B of the *Bush Fires Regulations 1954* are printed on the back of every permit issued by an authorised City fire officer.
- Running fire permits are issued by the Chief Bushfire Control Officer or their delegate for management of additional risk.
- Develop an online application form that registers the interest in obtaining a permit, aiding residents that may be time poor to call and enabling a faster turnover for fire officer communications.

	<b>TREATED RISK</b>		
	<b>Consequence</b>	<b>Likelihood</b>	<b>Rating</b>
<b>Health &amp; Safety</b>	Moderate	Rare	Low
<b>Reputation</b>	Moderate	Unlikely	Low
<b>Environment</b>	Significant	Unlikely	Medium
<b>Compliance</b>	Moderate	Unlikely	Low

<b>HAZARD/RISK</b>			
No plans, reviews or provisions are provided toward community safety education and awareness on conducting burning activities.			
	<b>UNTREATED RISK</b>		
	<b>Consequence</b>	<b>Likelihood</b>	<b>Rating</b>
<b>Reputation</b>	Major	Likely	Extreme
<b>Operation</b>	Major	Likely	Extreme

#### TREATMENTS

- Improve education on fire behaviour and managing fires through live demonstrations and workshops.
- Develop information sheets/guides that are available online and at engagement events to outline the importance of following burning conditions.
- Improve education on fire behaviour and managing fires through online available videos.
- Review website content as required to ensure current information on burning dates and applying for permits is available.
- Officers when engaging with residents provide both verbal educate and literature on the requirements.
- Collaborate with PR SMEs to develop a comprehensive communication and engagement plan for bushfire communication and engagement strategies.

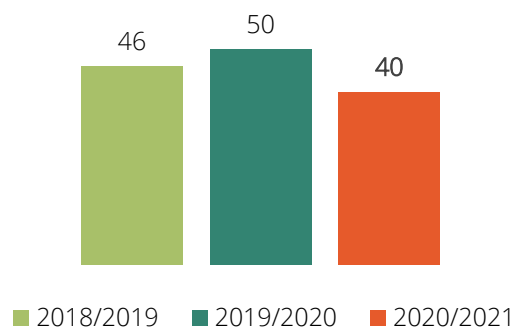
	<b>TREATED RISK</b>		
	<b>Consequence</b>	<b>Likelihood</b>	<b>Rating</b>
<b>Reputation</b>	Significant	Unlikely	Medium
<b>Operation</b>	Moderate	Rare	Low



### 3. ILLEGAL BURNS

#### 3.1 Outcomes

The following data on illegal burns is indicative only of the incidents that have been directly reported to the City during operating hours either by the local fire brigade or residents. The data presented does not represent all fires that have occurred within the City. This information can be obtained if applicable or required from DFES.

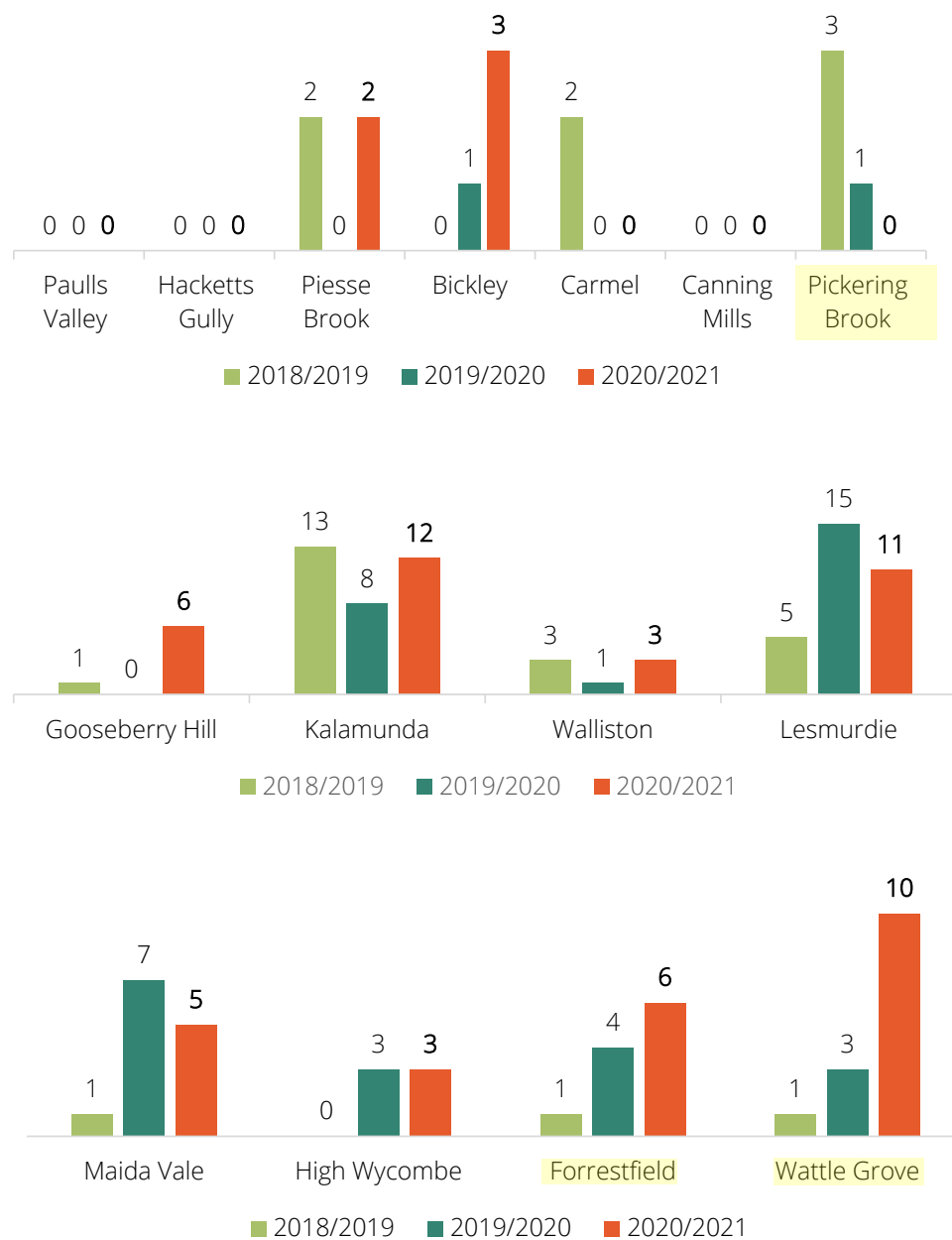


**Figure 8:** Total illegal private property burns reported and attended to by a City Fire Officer.

		2018/2019	2019/2020	2020/2021
Restricted Burning period	October	6	6	7
	November	9	5	6
Prohibited Burning Period	December	6	1	4
	January	4	0	1
	February	3	1	3
	March	3	2	3
Restricted Burning Period	April	8	12	8
	May	7	23	8

**Table 4:** Total illegal private property burns reported and attended to across restricted and prohibited burning periods.





**Figure 9:** Illegal private property burn reported and attended to across the Eastern Rural District, Escarpment, and the Foothills.



- 40 illegal burns were reported and attended to by City Fire Officers a decrease of 10 from last season.
- 95% of offences were related to failing to obtain a permit to burn and claimed to be unaware of the requirements and burning dates.
- One illegal burn occurred on a declared Total Fire Ban and resulted in an infringement for burning and caution for obstruction.
- Burning during the prohibited burning period ranged from burning rubbish (cardboard, plastic tubing etc) to fire pits.
- Illegal burning activity occurred evenly across the Escarpment with an increase in the Foothills.
- 10 infringements and 30 cautions were issued over the course of the season with most relating to the following:
  - Failed to extinguish the fire fully.
  - Failed to obtain a permit.
  - Started burning a small pile before the regulated time of 6pm.
  - Failed to have 3 people in attendance (as per permit regulations).
- Pickering Brook looks to be decreasing in burning offences. This may correlate with the level of property preparedness and bushfire safety awareness education from the street meet event held in October.
- Wattle Grove and Forrestfield show an increasing trend in their burning activity over the resulting breaches (Figure 9) under the *Bush Fires Act 1954* and *Bush Fires Regulations 1954*.
- The City endeavoured to improve collaboration with the local fire brigades over the 20/21 bushfire season by developing and providing a field book to capture non-compliance of burning activities in times where City staff were not on shift (between 19:00-06:30 weekdays and 1600- 06:30 weekends).
- It is predicted that future data will show a continuing downward trend as more illegal burning activity is being captured in the City's system, and as the community become more aware, educated, and responsible for fires.
- With the presence of COVID-19 restrictions and lockdowns more people may have remained home aiding residents to comply with permit regulations and safer burning as more time is spent on sourcing information on burning requirements.

### 3.2 Recommendations and Risk Assessments

The impact of illegal burning activity can lead to, if burns escape, property damage, environmental damage, personal impacts and can in some conditions result in a major bushfire. It is therefore important that measures are taken to reduce the risk of complacency, disregard for safety or ongoing limited awareness and understanding of the impacts a bushfire can have no matter its size or surrounding conditions.

It is evident that the City continues to provide education and awareness of bushfire safety, property preparedness and burning requirements to all residents with a targeted approach to those areas that display an increase in illegal burning activity. This can be achieved through collaboration with the City's PR and Customer Relations team to continually develop the Bushfire Engagement and Communication Plan, along with building strong relationships with the local fire brigades. It is also recommended that continuous skill refreshers and training modules are reviewed and made available to the City's fire officers to ensure currency and competency of skills and knowledge surrounding bushfire safety and compliance.



<b>HAZARD/RISK</b>			
The City fails to deploy enforcement actions when attending private property burns that breach the <i>Bush Fires Act 1954</i> and <i>Bush Fires Regulations 1954</i> .			
	<b>UNTREATED RISK</b>		
	<b>Consequence</b>	<b>Likelihood</b>	<b>Rating</b>
<b>Reputation</b>	Significant	Possible	High
<b>Operation</b>	Major	Almost certain	Extreme
<b>Environment</b>	Critical	Likely	Extreme
<b>Compliance</b>	Significant	Almost certain	High

#### TREATMENTS

- Officer training is provided and refreshed prior to commencing the bushfire season. Ensuring understanding and correct application of enforcement.
- Review policies and processes for enforcement.
- Capture evidence that assists in determining enforcement and education outcomes.
- Authorise City officers under the *Bush Fires Act 1954* and *Bush Fires regulations 1954*.
- Develop strong, positive relationships with the local fire brigades that will aid in information and evidence sharing to conduct appropriate enforcement actions.

	<b>TREATED RISK</b>		
	<b>Consequence</b>	<b>Likelihood</b>	<b>Rating</b>
<b>Reputation</b>	Significant	Unlikely	Low
<b>Operation</b>	Moderate	Unlikely	Low
<b>Environment</b>	Significant	Unlikely	Medium
<b>Compliance</b>	Moderate	Unlikely	Low

<b>HAZARD/RISK</b>			
Unnecessary use of fire brigade resources and time due to City inaction toward compliance and education.			
	<b>UNTREATED RISK</b>		
	<b>Consequence</b>	<b>Likelihood</b>	<b>Rating</b>
<b>Financial</b>	Moderate	Almost certain	High
<b>Health &amp; Safety</b>	Significant	Likely	High
<b>Reputation</b>	Moderate	Likely	Medium

#### TREATMENTS

- Develop a community engagement and communication plan that encourages education on fire behaviour.
- Establish clear processes for City Fire Officers when attending illegal burns and when to request the fire brigades.
- Collaborate with local fire brigades on repeat offenders they attend and requests for City officers.
- Authorise City Fire Officers under the *Bush Fires Act 1954* and *Bush Fires Regulations 1954*.

	<b>TREATED RISK</b>		
	<b>Consequence</b>	<b>Likelihood</b>	<b>Rating</b>
<b>Financial</b>	Insignificant	Likely	Low
<b>Health &amp; Safety</b>	Insignificant	Likely	Low
<b>Reputation</b>	Moderate	Unlikely	Low

<b>HAZARD/RISK</b>			
Escaped burns damage the surrounding infrastructure, environment and/or people resulting in increased expenditure of repairs, welfare, PPE, maintenance, BCP impacts etc.			
	<b>UNTREATED RISK</b>		
	<b>Consequence</b>	<b>Likelihood</b>	<b>Rating</b>
<b>Financial</b>	Critical	Likely	Extreme
<b>Health &amp; Safety</b>	Critical	Likely	Extreme
<b>Reputation</b>	Major	Likely	Extreme
<b>Operation</b>	Significant	Likely	High
<b>Environment</b>	Critical	Likely	Extreme
<b>Compliance</b>	Significant	Likely	High

**TREATMENTS**

- Officer training is provided and refreshed prior to commencing the bushfire season. Ensuring understanding and correct application of enforcement.
- Review policies and processes for enforcement.
- Capture evidence that assists in determining enforcement and education outcomes.
- Authorise City officers under the *Bush Fires Act 1954* and *Bush Fires regulations 1954*.
- Develop strong, positive relationships with the local fire brigades that will aid in information and evidence sharing to conduct appropriate enforcement actions.

	<b>TREATED RISK</b>		
	<b>Consequence</b>	<b>Likelihood</b>	<b>Rating</b>
<b>Financial</b>	Critical	Possible	High
<b>Health &amp; Safety</b>	Critical	Possible	High
<b>Reputation</b>	Moderate	Likely	Medium
<b>Operation</b>	Significant	Possible	High
<b>Environment</b>	Critical	Possible	High
<b>Compliance</b>	Moderate	Unlikely	Low



## 4. FIRE HAZARD ASSESSMENTS

This section is reflective of the fire hazard assessment period that commenced 1 November 2020 and concluded 31 March 2021.

### 4.1 Outcomes

- The City developed the Fire Hazard Assessment Plan 2020/2021 that outlined strategies and processes for conducting fire hazard assessments against the Fire Hazard Reduction Notice.
- Included in the season was the implementation of a new assessment application named Zoodata improving on data capturing and evidence gathering. The application proved stable in comparison to the previous season, which in turn allowed a significant increase of follow up assessments to be conducted.
- Not all properties could be assessed due to resource limitations, so a strategy using the Bushfire Risk Management System (BRMS) seen in figure 10. Properties risk rated extreme and very high were assessed in the first instance.
- The impact of COVID on fire hazard assessments was minor and did not prohibited officers from conducting property visits. Officers maintained physical distancing, mask wearing as required, did not directly (face to face) engage with residents that presented flu symptoms or that were self-isolating.
- Postal delays due to COVID-19 were experienced delaying some residents the ability to plan and action their work orders. To ensure a fair and equitable approach the City allowed an additional 14 days to accommodate this issue.

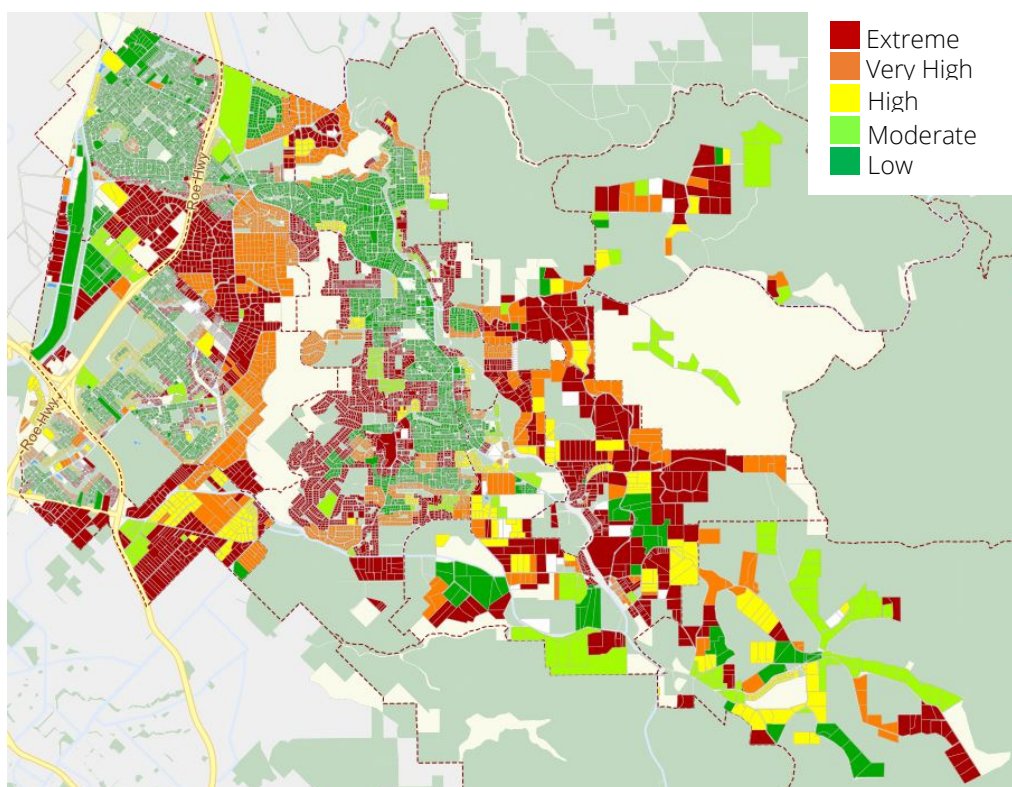


Figure 10: Bushfire Risk Management System (BRMS) risk rated properties.

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#### 4.1.1 Fire Hazard Reduction Notice (the Notice)

- Collaboration with the Chief Bushfire Control Officer (CBFCO) and the Bushfire Advisory Committee (BFAC) resulted in an update to the design of the Notice.
- Design updated aimed to improve on capturing the reader's attention and its level of importance.
- The addition of important dates was included as previous season feedback indicated that residents were not aware that such assessments took place.
- Additional elements such as environmental sensitivities, clarity of maintained lawns, fuel loads and asset protection zone standards were included and updated.

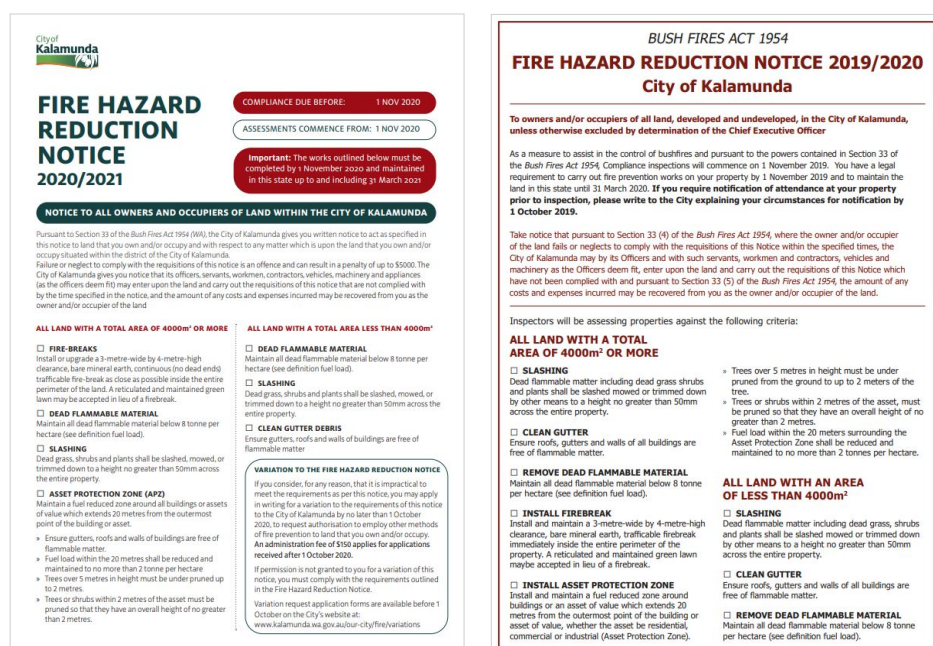
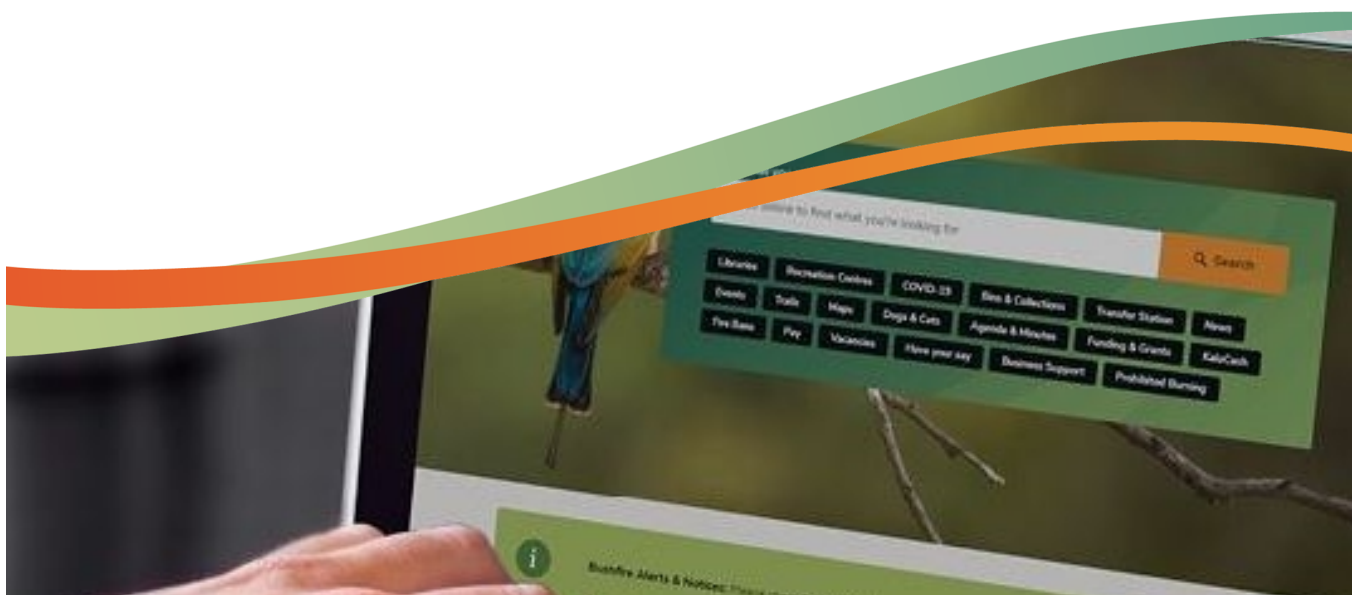


Figure 11: Design update in comparison with the 2019/2020 Notice.



#### 4.1.2 Variations

- 136 variation applications were received and approved (15.8% increase).
- 104 applications were received prior to 1 October (79% increase). This positively displays an increase in awareness of the requirement under the Notice and may also indicate that the Notice is being retained and read.
- 32 applications were received after 1 October and incurred the administration fee. (45% decrease). Majority of the late applications were due to either having never been assessed in the past or not being aware of what a variation means or the need to apply.

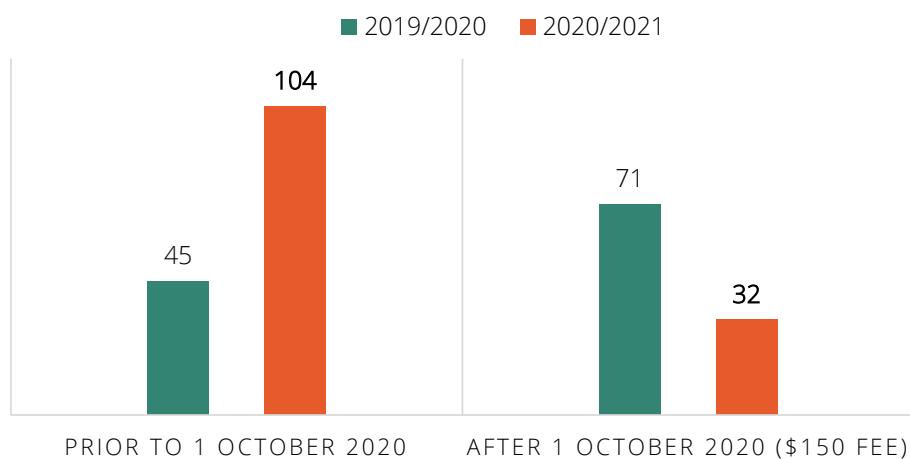
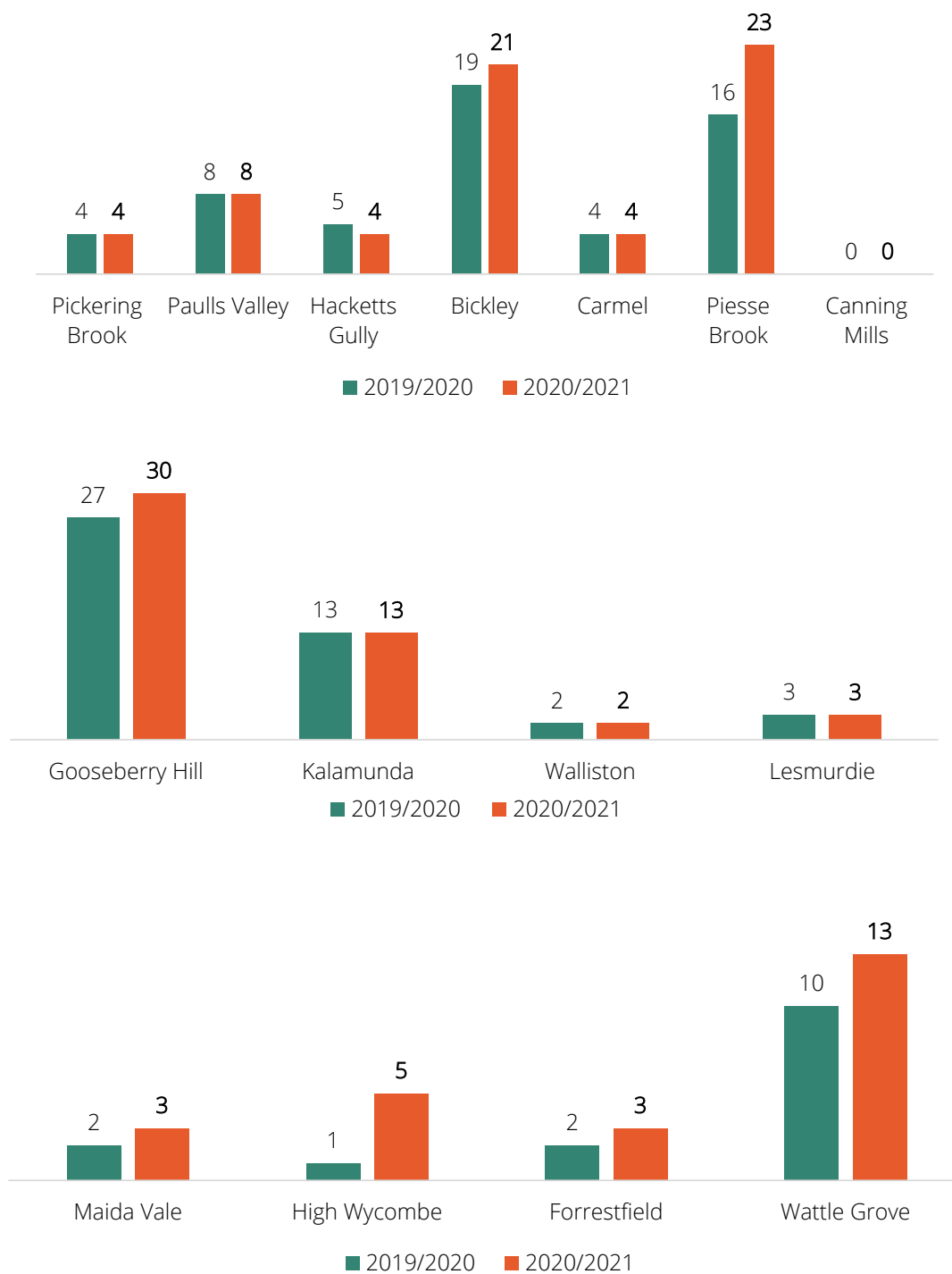


Figure 12: Variation applications received prior to and after 1 October.





**Figure 13:** Variation applications approved across the Eastern Rural District, Escarpment, and the Foothills.



#### 4.1.3 Training & Staff

- The City employed three (3) casual fire officers to assist with implementing the fire hazard assessment plan and its strategies.
- 3 Hire vehicles were obtained for the period of the casual fire officers' employment and provided a safe and effective means of assessing trafficability of fire breaks.
- The officers commenced 19 October 2020 allowing time for formal induction and training and concluded their contract 4 February 2021.
- This onboarding timeframe was limited in ensuring effective training outcomes specifically in customer service and communications for the officer's role in fire compliance.
- A pilot training program was established in 2019/2020 season to combat the short onboarding timeframe, and from the feedback of officers. The training program aimed to ensure consistent information is provided each to each new officer. It outlined processes and procedures implemented through risk assessment and relevant materials to assist in understanding roles and responsibilities. The training program received positive feedback however requires further planning for improved execution.



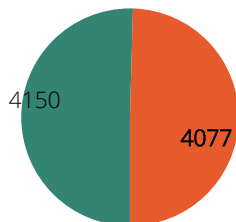


POSITION		ROLE/RESPONSIBILITY
<b>Manager Environmental Health &amp; Community Safety</b>	James Wickens	<ul style="list-style-type: none"> <li>Enforcement reviews and support</li> <li>COVID-19 Hardship approvals</li> <li>Complaints management</li> </ul>
<b>CESM/Chief Bushfire Control Officer</b>	Mike Ward	<ul style="list-style-type: none"> <li>Training support</li> <li>Variation's review and approvals</li> <li>Property assessment support</li> </ul>
<b>Coordinator Community Safety</b>	Tim Parry	<ul style="list-style-type: none"> <li>Enforcement reviews and support</li> <li>COVID-19 Hardship approvals</li> <li>Complaints management</li> </ul>
<b>Senior Fire &amp; Emergency Management Officer</b>	Jamie Hunter	<ul style="list-style-type: none"> <li>Facilitation and delivery of training program</li> <li>Coordination of assessments and support</li> <li>Administration support</li> <li>Property assessment &amp; fire hazard complaints support</li> <li>Work order extension request support</li> </ul>
<b>Senior Ranger</b>	Sarah Stampalia	<ul style="list-style-type: none"> <li>Administration support (reserve)</li> <li>Property assessment support</li> </ul>
<b>Fire &amp; Emergency Management Officer</b>	Grant Howatson	<ul style="list-style-type: none"> <li>In field support</li> <li>Property assessments &amp; Fire hazard complaints</li> <li>Administration support</li> <li>Enforcement reviews</li> <li>Work order extension requests</li> </ul>
<b>Customer Relations Officer (CRO)</b>	Emma Morgan Angie House	<ul style="list-style-type: none"> <li>Administration lead and support</li> <li>Fire hazard complaints</li> </ul>
<b>Casual Fire Control Officers</b>	Ashleigh Endersbee Daniel Bates Lari Saukko	<ul style="list-style-type: none"> <li>Property assessments</li> <li>Fire hazard complaints</li> <li>Work order extension requests</li> <li>Enforcement review</li> </ul>
<b>Rangers</b>	Laura Parker Gary MacMillan Brenton Pope Megan Carter Phil Munkton Nikki Branson	<ul style="list-style-type: none"> <li>Property assessments</li> <li>Work order extension requests</li> <li>Enforcement review</li> <li>Zoning Certificate assessments (fire hazards)</li> </ul>

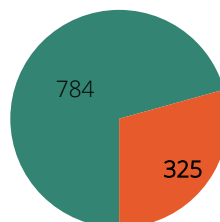
**Table 5:** Fire compliance team that assisted in operational and administrative tasks across bushfire engagement events, issuing permits to burn, illegal burns on private property and fire hazard assessments.

#### 4.1.4 Fire Hazard Assessments

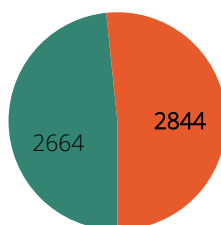
- Fire Hazard Assessments commenced 1 November 2020 and concluded 31 March 2021.
- Assessments followed a staged approach of routines and follow ups.
- 4077 properties were visited and assessed for fire hazard under the Notice.
- A significant improvement in follow up assessments were completed (82% increase).
- Although the data shows more properties were assessed in the 2019/2020 season, the application software issues resulted in a significant number of properties that were not followed up after a work order (figure 15). This left a relatively unknown status of property preparedness and compliance for 2019/2020.
- Compliant outcomes at the time of assessment were a 6.5% improvement.
- 1001 work orders were issued across the assessment period (17.7% improvement).
- Infringements against section 33 this season including work orders attached. This was to ensure that required works were still actioned and officers continued to follow up on fire hazards.
- 325 work orders were outstanding (not followed up) due to the casual fire officers concluding their contract early February,
- 161 (3.9%) of properties were marked inaccessible largely due to locked gates, however by the end of the assessment season less than 1% of properties remained in this status and no further enforcement actions were required.



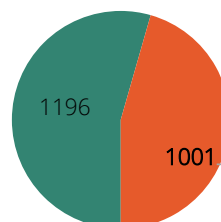
**Figure 14:** Total fire hazard assessments conducted.



**Figure 15:** Work orders outstanding (no follow ups conducted).



**Figure 16:** Total properties deemed compliant at the time of assessment.



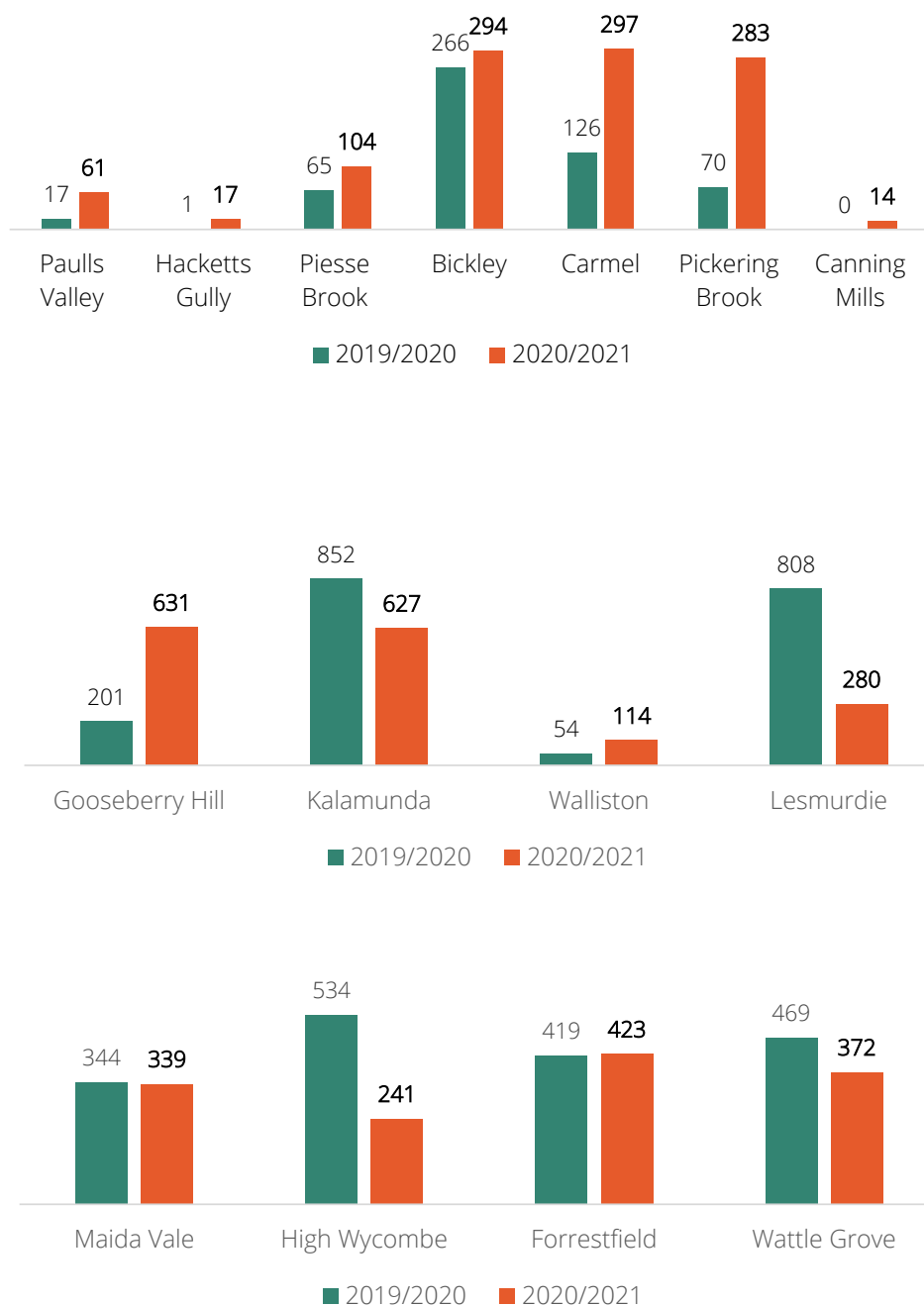
**Figure 17:** Total work orders issued.

■ 2019/2020 ■ 2020/2021

The following tables display fire hazard assessment outcomes across all areas assessed with a compliance outcome sitting well over 50%.

	Assessments completed	Compliant outcome	Work orders issued	Infringement issued
<b>Eastern Rural District</b>				
Pickering Brook	283	213 75.2%	51 18%	5 1.7%
Pauls Valley	61	37 60.6%	12 19.6%	1 1.6%
Hacketts Gully	17	14 82.3%	2 11.7%	0 0
Bickley	294	243 82.6%	39 13.2%	3 1%
Carmel	297	244 82.1%	33 11.1%	5 1.6%
Piesse Brook	104	73 70.1%	25 24%	3 2.8%
Canning Mills	14	8 57.1%	1 7.1%	0 0
<b>Escarpment</b>				
Gooseberry Hill	631	404 64%	212 33.5%	5 <1%
Kalamunda	627	522 83.2%	77 12.2%	10 1.5%
Walliston	114	100 87.7%	12 10.5%	2 1.7%
Lesmurdie	280	197 70.3%	71 25.3%	6 2.1%
<b>Foothills</b>				
Maida Vale	339	195 57.5%	122 35.9%	10 2.9%
High Wycombe	241	157 65.1%	73 30.2%	5 2%
Forrestfield	423	274 64.7%	123 29%	12 2.8%
Wattle Grove	372	164 44%	153 41.1%	17 4.5%

**Table 6:** Fire hazard assessment outcomes from 1 November 2020 to 31 March 2021.



**Figure 18:** Fire hazard assessments conducted across the Eastern Rural District, Escarpment, and the Foothills.

- Majority of properties both over the 4000m<sup>2</sup> and under where non-compliant against long standing dead grasses followed by fire breaks. As previously noted, that may have been a combination of the rainfall over the November and fire bans declared.
- Relative to the number of properties assessed the foothills presented the highest outcomes of non-compliance across both under and over 4000m<sup>2</sup> property sizes.

Non-Compliance	Total Work Orders Issued	
Fire Breaks	399	39%
Fuel load (over 8 tonne p/ha)	245	24.4%
Grasses	505	50.4%
Asset Protection Zone	135	13.4%
Gutters	299	29.8%
Additional works	318	31.7%

**Table 7:** Total work orders issued against individual Notice requirements.

	Pickering Brook	Paulls Valley	Hacketts Gully	Piesse Brook	Bickley	Carmel	Canning Mills
<b>4000m<sup>2</sup> or more</b>							
Fire Breaks	23	9	1	16	10	12	0
Fuel load (over 8 tonne p/ha)	0	0	0	0	0	11	0
Grasses	28	4	1	9	5	13	0
Asset Protection Zone	3	5	1	5	0	3	0
Gutters	9	3	0	8	4	4	0
Additional works	5	10	0	15	1	1	1
<b>Under 4000m<sup>2</sup></b>							
Fuel load (over 8tonne p/ha)	0	0	0	0	2	4	0
Grasses	6	0	0	0	9	6	0
Gutters	9	0	0	0	0	0	0
Additional works	3	0	0	0	12	0	0



	Gooseberry Hill	Kalamunda	Walliston	Lesmurdie
4000m <sup>2</sup> or more				
Fire Breaks	13	6	5	5
Fuel load (over 8tonne p/ha)	11	17	3	6
Grasses	1	9	6	7
Asset Protection Zone	10	14	2	4
Gutters	6	4	1	0
Additional works	9	0	0	2

Under 4000m <sup>2</sup>				
Fuel load (over 8tonne p/ha)	44	37	2	17
Grasses	58	41	6	38
Gutters	107	0	0	0
Additional works	100	2	0	28

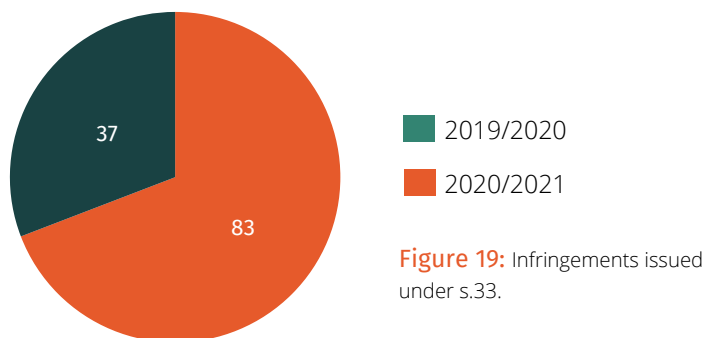
	Maida Vale	High Wycombe	Forrestfield	Wattle Grove
4000m <sup>2</sup> or more				
Fire Breaks	82	43	78	96
Fuel load (over 8tonne p/ha)	10	12	8	40
Grasses	39	18	55	69
Asset Protection Zone	14	12	11	51
Gutters	34	21	29	43
Additional works	19	5	31	24

Under 4000m <sup>2</sup>				
Fuel load (over 8tonne p/ha)	4	1	14	2
Grasses	12	18	24	23
Gutters	0	0	3	14
Additional works	15	23	3	9

**Table 8:** Total work orders issued for Notice requirements by property size across the Eastern Rural District, Escarpment, and the Foothills.

#### 4.1.5 Enforcement

- 83 infringements were issued for non-compliance under the Notice (s.33) (76.6% increase). This increase is due to the increase of follow up assessments that were successfully completed.
- Payment plans for infringement payments were reviewed and approved for COVID-19 hardship claims for residents that advised the City of their circumstances.
- The City attempts at all stages to engage with the property owners and/or residents to complete works outlined on their work orders and the Notice. This season the City engaged a contractor for a property risk rated extreme in order to upgrade and install their fire breaks, which they failed to action on several occasions including work orders from the previous two bushfire seasons.



**Figure 19:** Infringements issued under s.33.



**Figure 20:** Machinery upgrading fire breaks on private property in Paulls Valley.

#### 4.1.6 Recommendations and risk assessment

The City continually implements strategies and plans towards the threat of bushfire on its community. It is recommended that the Notice maintains its process or review and updates ensuring it remains current to surrounding environmental concerns.

The variations have improved considerably however still prompted an improvement for available information that explains variations and their purpose. The recommendation is to develop some printable guides available online or read on the website.

In order to continually improve and increase the effectiveness of current plans and strategies, further resourcing is required. Such requirements would include additional staff and the extension of their contract timeframe, where a start date would involve 1 October and conclude 31 March. This would allow effective training and compliance exposure whilst practical training in community engagement and communication. This recommendation is also backed by consistent feedback from previous casual fire officers at the conclusion of their time with the City.



<b>HAZARD/RISK</b>			
The City does not develop and issue a Fire Hazard Reduction Notice under section 33 of the <i>Bush Fires Act 1954</i> .			
	<b>UNTREATED RISK</b>		
	<b>Consequence</b>	<b>Likelihood</b>	<b>Rating</b>
<b>Reputation</b>	Major	Unlikely	Medium
<b>Compliance</b>	Major	Unlikely	Medium

**TREATMENTS**

- Review and implement the Notice annually prior to the commencement of each bushfire season.
- Collaborate with stakeholders for reviews and changes to legislation if relevant.
- Include community feedback and observation in review of readability, design, and clarity.
- Distribute the Notice with the Rates to ensure all landowners receive it (including E-Rates).
- Incorporate the Notice into the Bushfire Community Engagement and Communication Plan.
- Distribute the Notice to centers such as rec centers, libraries, and the City's front counter to enhance visibility and availability.
- Provide the Notice in a digital compacity on the website and for download.

	<b>TREATED RISK</b>		
	<b>Consequence</b>	<b>Likelihood</b>	<b>Rating</b>
<b>Reputation</b>	Moderate	Rare	Low
<b>Compliance</b>	Insignificant	Rare	Low



<b>HAZARD/RISK</b>			
The City does not enforce the Notice requirements by conducting fire hazard assessments.			
	<b>UNTREATED RISK</b>		
	<b>Consequence</b>	<b>Likelihood</b>	<b>Rating</b>
<b>Reputation</b>	Major	Possible	High
<b>Environment</b>	Significant	Possible	High
<b>Compliance</b>	Significant	Unlikely	Medium

#### **TREATMENTS**

- Develop and implement a Fire Hazard Assessment Plan for each season reflective of the policies, processes, and procedures in place.
- Review each season and adapt the plan where or if required.
- Employ or hire additional resources to implement the plan in place.
- Provide effective training to all fire compliance staff to ensure consistent information and outcomes are achieved.
- Provide communication through media chains of the commencement of assessments and officers in the area. This improves community perception of the City and their role in community safety.

	<b>TREATED RISK</b>		
	<b>Consequence</b>	<b>Likelihood</b>	<b>Rating</b>
<b>Reputation</b>	Moderate	Unlikely	Low
<b>Environment</b>	Moderate	Unlikely	Low
<b>Compliance</b>	Insignificant	Rare	Low

## REFERENCES

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## APPENDIX 1

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**11. Motions of Which Previous Notice has been Given****11.1. Fire Hazard Mitigation**RESOLVED OCM 44/2021**Voting Requirements: Simple Majority**

That Council REQUEST the Chief Executive Officer to:

1. seek quotes from external auditors to undertake an audit of the City's Fire Hazard Mitigation practices including but not limited to;
  - a) Current funding allocation.
  - b) Community engagement strategy/s.
  - c) Community education packages.
  - d) Staff training package.
  - e) Efficacy of timing and method of issuing Fire Hazard Reduction Notices and other communications to residents.
  - f) Benchmarking against the City's practices against other similar Local governments (ie Cities of Armadale, Wanneroo and Swan and Shires of Mundaring and Chittering).
2. include the quotations within the draft 2021/22 operating budget for consideration by Council.

Moved: **Cr Lesley Boyd**Seconded: **Cr Geoff Stallard**

Vote:	<u>For</u> <b>Cr Lesley Boyd</b> <b>Cr Geoff Stallard</b> <b>Cr Mary Cannon</b> <b>Cr Dylan O'Connor</b>	<u>Against</u> <b>Cr John Giardina</b> <b>Cr Janelle Sewell</b> <b>Cr Brooke O'Donnell</b> <b>Cr Sue Bilich</b> <b>Cr Lisa Cooper</b> <b>Cr Cameron Blair</b> <b>Cr Kathy Ritchie</b> <b>Cr Margaret Thomas</b>
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**LOST (4/8)****Rationale**

1. In 2011, close by we witnessed the Roleystone-Kelmscott Bushfires, and on 1 February this year the Wooroloo Bushfires. 95% of the City of Kalamunda area is prone to bushfire, therefore the risk to residents is high and ensuring mitigation is paramount.

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2. Since 2018/19 there has been a 100% increase in the number of properties the City inspects, which has also resulted in an increase in work orders and non-compliance related infringements.
3. Residents understand the importance of fire safety. To ensure the best outcomes and reduced risk it is imperative the residents are brought along the journey and remain engaged positively with the City.
4. It is acknowledged by the City that in response to improved practices and reviews from recent major bushfires, the City's Fire Hazard Reduction Notice has the propensity to change from year to year to remain contemporary. Therefore, the communication strategy and engagement of the community is important to ensure and understand of the changing expectations. Individuals including some of our seniors have expressed difficulty in understanding what is expected of them. Residents need to understand what options are available to them, which many of them do not.
5. The purpose of the audit is to assist provide feedback to the City regarding its processes and strategies. The moderate cost associated to engage an expert far out ways the likely benefits to the community
6. Given the risk to 95% of the City it is vital we are open to external review and if necessary, implementing reviewed practices. An audit will provide an understanding around the City's preparedness and how engaged the community is with the direction and strategies the City has and is taking.
7. In considering the physical location of the City, with the position relative to the scarp and bushland fire mitigation is fundamental, combined with the community's preparedness. This can and will only be achieved through effective education and understanding.
8. While there has been improvement over the years with communication and opportunities for most residents to attain fire safety, questions remain; can we do better, can we look and learn from others, can we do anything different, are there areas we haven't covered. An audit will provide these answers.

**Officer Comment:**

Fire Hazard Reduction Notice:

1. Pursuant to Section 33 of the Bush Fires Act 1954, the City issues a Fire Hazard Reduction Notice (the Notice) every year to put measures in place to prevent the outbreak, spread or extension of bush fire.
2. In support of the Notice, the City undertakes private property inspections to ensure compliance with the Notice.

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3. Whilst over 90% of the City is within a designated Bushfire Prone Area, it is not correct to assume that 95% of the City is at high risk of bushfire. The City's adopted Bushfire Risk Management Plan and associated mapping rates the risks of each part of the City. Some parts are assessed as extreme or high risk while others are lower because of specific area characteristics despite being designated bushfire prone.

Fire Hazard Assessment Plan:

4. To guide the City's private property inspections, the City prepares an annual Fire Hazard Assessment Plan (the Plan). The purpose of the Plan is to outline the manner in which the City will undertake private property inspections.
5. The Plan utilises previous non-compliance, complaints, and a comprehensive risk assessment to determine the priority of assessments throughout the City. The key intent of the Notice and the Plan is to reduce the overall risk profile of the City by ensuring all very high and extreme private properties are assessed before moving onto lower risk properties.
6. The Plan also utilises a combination of community engagement programs to support the assessments, which are focused on empowering residents to be fire ready before the 1 November assessment program. The focus of the engagement programs is to increase fire safe practices, asset preparedness and community resilience, while giving residents information on how to comply with the Notice.
7. The Plan is presented to Council every year prior to the commencement of the bushfire season.
8. A comprehensive presentation was also provided to Council at the 2 March 2021 Strategy Session in relation to the Notice, Plan and inspections.

Response to Matters Outlined in the Notice of Motion:

9. In regards to the practices outlined to be audited, the City can advise as follows:
  - a) Current funding allocation: Approx. \$550,000 is allocated to private property fire mitigation every year.
  - b) Community engagement strategies / packages: Extensive community engagement programs are prepared prior to and during the fire season. A copy of the extensive Community Engagement Plan from last fire season is attached. The City welcomes feedback from Councillors as to suggested improvements that can be made in developing next year's Community Engagement Plan having regard for feedback that has been

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- received from residents. The City also assimilates findings and improvements with information and feedback received from Councillors.
- c) Staff training package: Section 11 of the Plan comprehensively outlines the City's training processes in relation to private property inspections.
  - d) Efficacy of timing and method of issuing the Notice and other communications to residents: The Notice is issued with the City's rates every year prior to the season commencing. In addition, extensive community engagement programs are prepared prior to and during the fire season. A copy of the Community Engagement Plan from last fire season is attached.
  - e) Local Government benchmarking: Each local government area is different and requires a tailored approach to fire prevention. Feedback received from the Department of Fire and Emergency Services (DFES) indicates that the City of Kalamunda has a comprehensive private property inspection process for ensuring compliance with the Notice.

Statistics from 2020/21 Fire Season (as of 9 March 2021):

Statistics from the 2020/21 Fire Season are outlined below.

No. of Assessments	No. of Work Orders	No. of Infringements	Escalated to Crs
3,944	1027 (26%)	82 (2%)	16 (0.4%)

Estimated Cost & Timeframe:

- 10. To undertake a detailed audit as recommended through the Notice of Motion, it is estimated to cost a total of approx. \$15,000 - \$20,000. That being approx. 60 – 80 hours of audit time by a audit professional with expertise in fire hazard mitigation. There is no budget allocation for this work and approval of unbudgeted funds would be necessary, thus requiring an Absolute Majority decision of Council.
- 11. It is also not unreasonable to consider that preparing an appropriate scope, seeking the necessary quotations, engaging an auditor and having them investigate and prepare a report would not see any further reporting to Council on the audit until after the issue of Fire Hazard Notice for 21/22. As such, any potential changes to the City's processes may not occur until 2022/23

Conclusion:

- 12. The City provides comprehensive information and oversight to Council through the following:
  - a) Presentations at Strategy Sessions prior to the fire season commencing and on an as needs basis throughout the season.

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- b) A weekly update on infringements and cautions issued through the Councillor Information Bulletin.
  - c) Formal presentation of the Plan to Council for noting prior to each season commencing.
  - d) Providing Councillors detailed information on any specific issues that arise throughout the season.
13. The City is of the view that the statistics outlined above in conjunction with the comprehensive information and oversight provided to Council prior to and during the fire season does not warrant the cost of an independent audit of the City's fire mitigation practices. On this basis, the Notice of Motion is not supported.

**Attachments:**

1. Fire Hazard Reduction Notice 2020/21:  
[https://kalblob.blob.core.windows.net/kallibrary/docs/default-source/agenda-and-minutes/2020/attachments/ordinary-council-meeting-attachments---27-october-2020/10-1-2-2-fire-hazard-reduction-notice-2020-2021.pdf?sfvrsn=44beaa42\\_2](https://kalblob.blob.core.windows.net/kallibrary/docs/default-source/agenda-and-minutes/2020/attachments/ordinary-council-meeting-attachments---27-october-2020/10-1-2-2-fire-hazard-reduction-notice-2020-2021.pdf?sfvrsn=44beaa42_2)
2. Fire Hazard Assessment Plan 2020/21:  
[https://kalblob.blob.core.windows.net/kallibrary/docs/default-source/agenda-and-minutes/2020/attachments/ordinary-council-meeting-attachments---27-october-2020/10-1-2-1-fire-hazard-assessment-plan-2020-2021.pdf?sfvrsn=4945b902\\_2](https://kalblob.blob.core.windows.net/kallibrary/docs/default-source/agenda-and-minutes/2020/attachments/ordinary-council-meeting-attachments---27-october-2020/10-1-2-1-fire-hazard-assessment-plan-2020-2021.pdf?sfvrsn=4945b902_2)
3. Community Engagement Plan 2020/21:  
<https://kalblob.blob.core.windows.net/kallibrary/docs/default-source/fire-emergency-docs/preparedness/bushfire-preparedness-community-engagement-plan.pdf>
4. Presentation to Council at Strategy Session 2 March 2021:  
<https://kalblob.blob.core.windows.net/kallibrary/docs/default-source/fire-emergency-docs/preparedness/fire-prevention.pdf>

Cr O'Donnell presented a motion which received a seconder before being put to a vote.

**RESOLVED OCM 45/2021**

<b>Voting Requirements: Simple Majority</b>
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That Council:

1. REQUEST the Chief Executive Officer to:
  - a) engage with the Department of Fire and Emergency Services to seek their acceptance on a collaboration with the City of Kalamunda to undertake a