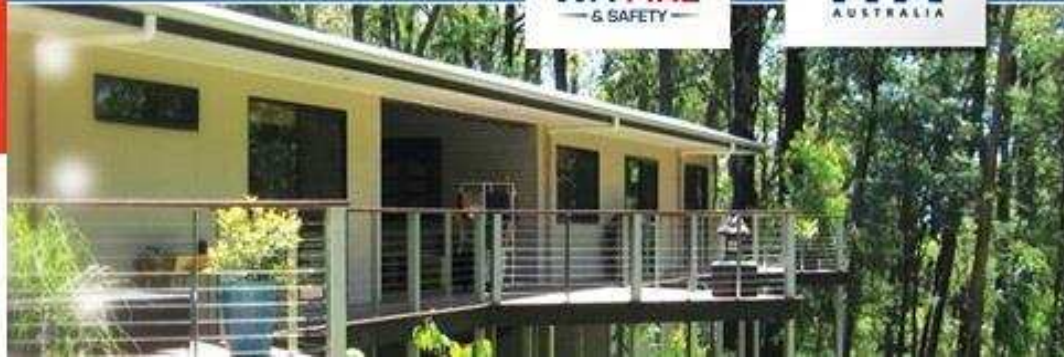


Bushfire Attack Level Report



BPAD
Bushfire
Planning & Design
Accredited Practitioner
Level 2



AS 3959 BAL Assessment Report

CTL+ Mouse Click for: [Help to Understand](#)

This report has been prepared by an Accredited BPAD Practitioner using the Simplified Procedure (Method 1) as detailed in Section 2 of AS 3959 – 2018. FPA Australia makes no warranties as to the accuracy of the information provided in the report. All enquiries related to the information and conclusions presented in this report must be made to the BPAD Accredited Practitioner, WA Fire & Safety, contact details below.



Property Details and Description of Works

Address Details	Lot	2654	No.		Street name	Bayview Road
	Suburb	Gap Ridge			State	Western Australia
Local government area	City of Karratha					
Main BCA class of the building	Mixed Class	Use(s) of the building	Hotel and Restaurant			
Description of the building or works	New Builds.				Multiple Structures	

Report Details

Report Number	24320	Version	1.0	Assessment Date	19 March 2024	Report/Certificate Date	21 March 2024
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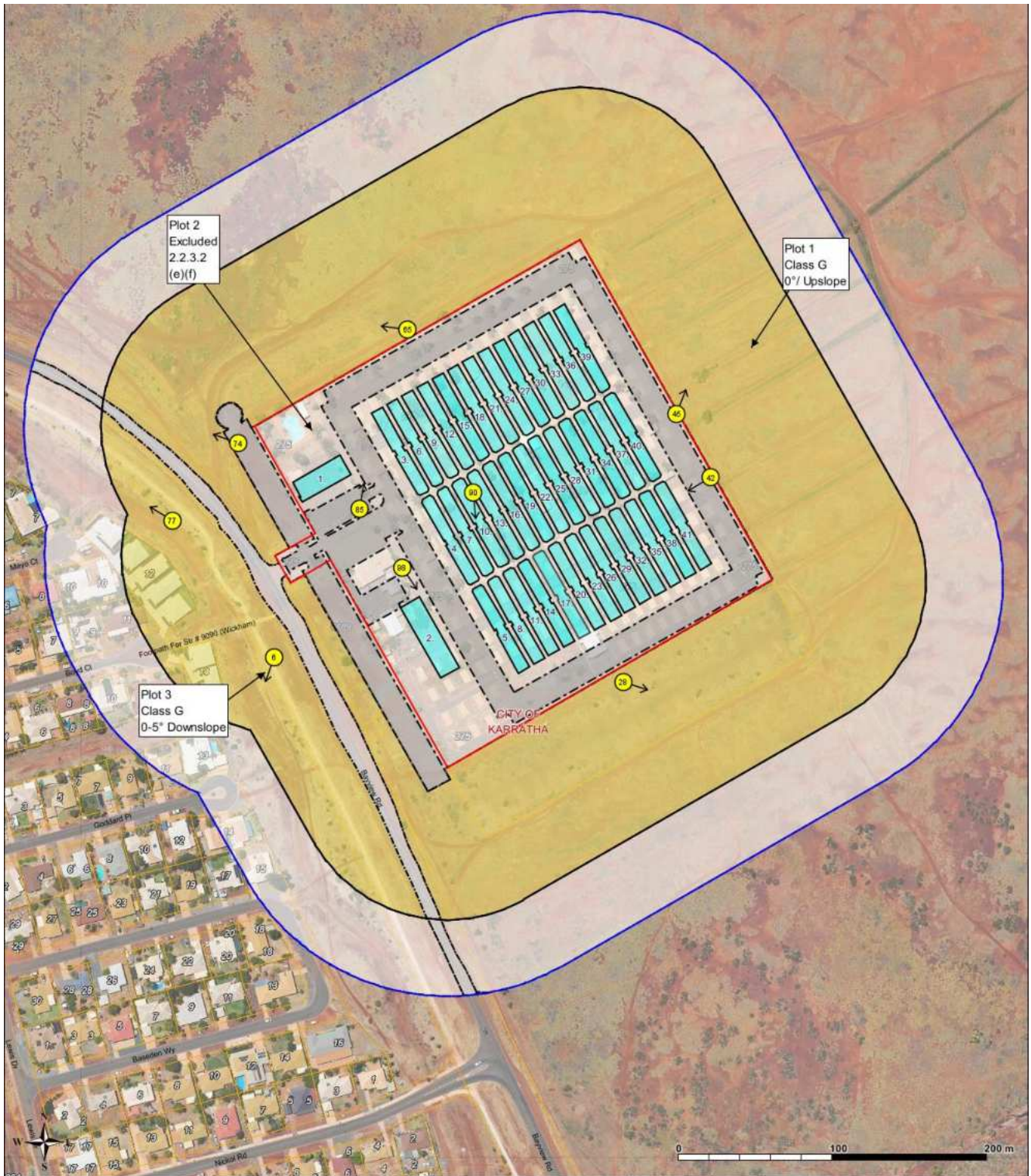
BPAD Accredited Practitioner Details

Name Dwayne Griggs BPAD40466 (Level 2)	<i>Authorised Practitioner Stamp</i> I hereby declare that I am a BPAD accredited bushfire practitioner Accreditation No. BPAD 40466 Signature: 
Company Details Email: admin@wafiresafety.com.au Mobile: 0415684681 Links to: Facebook & Google 	

Reliance on the assessment and determination of the Bushfire Attack Level contained in this report should not extend beyond a period of 12 months from the date of issue of the report. If this report was issued more than 12 months ago, it is recommended that the validity of the determination be confirmed with the Accredited Practitioner and where required an updated report issued.

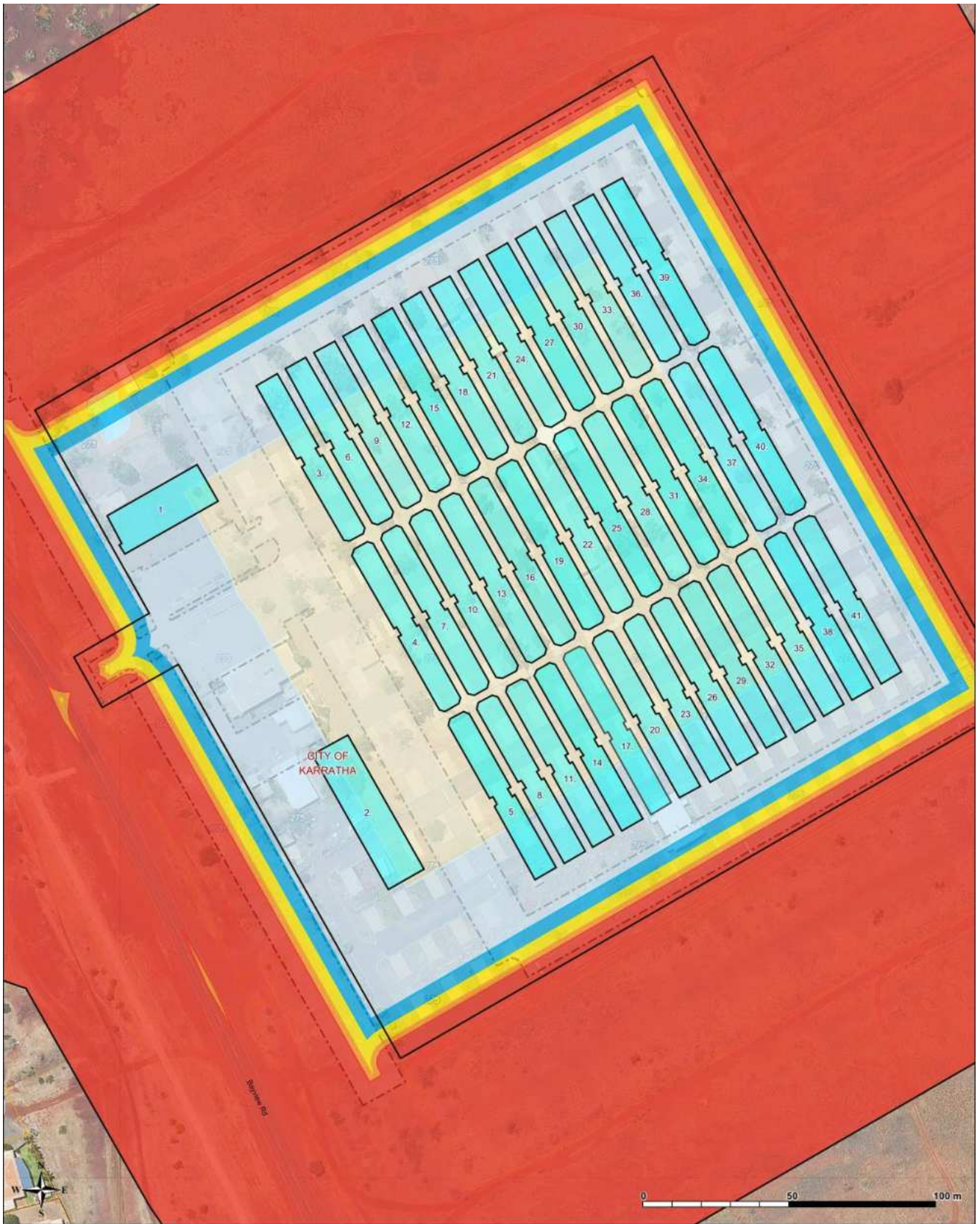
Site Assessment Map

The assessment of this site / development was undertaken by a BPAD Accredited Practitioner for the purpose of determining the Bushfire Attack Level in accordance with AS 3959 - 2018 Simplified Procedure (Method 1).



Legend

Photo points Photo points 100m Vegetation Survey 100m 150m Vegetation Survey Exc 2.2.2.2(a) 150m	Property boundary(Size) 6.3ha Buildings (new) 1. Bar and Beer Garden 10. Suite 15-16 11. Suite 17-18 12. Suite 19-20 13. Suite 21-22 14. Suite 23-24 15. Suite 25-26 16. Suite 27-28 17. Suite 29-30 18. Suite 31-32 19. Suite 33-34 2. Restaurant 20. Suite 35-36 21. Suite 37-38 22. Suite 39-40 23. Suite 35-36 24. Suite 41-42 25. Suite 43-44 26. Suite 45-46 27. Suite 47-48 28. Suite 49-50 29. Suite 51-52 3. Suite 1-2 30. Suite 53-54 31. Suite 55-56 32. Suite 57-58 33. Suite 59-60 34. Suite 61-62 35. Suite 63-64 36. Suite 65-66 37. Suite 67-68 38. Suite 69-70 39. Suite 71-72 4. Suite 3-4 40. Suite 73-74 41. Suite 75-76 5. Suite 5-6 6. Suite 7-8 7. Suite 9-10 8. Suite 11-12 9. Suite 13-14	Veg 0-100m Excluded, ef, 0 G Grassland, -5 G Grassland, 0 100-150m Excluded 2.2.3.2 (a) Excluded, a, 0 Local Government Authority 	State Roads Other Roads DPIRD 2m Contours
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Legend

<p>100m Vegetation Survey</p> <p>100m</p> <p>150m Vegetation Survey Exc 2.2.2.2(a)</p> <p>150m</p> <p>Property boundary(Size)</p> <p>6.3ha</p>	<p>Buildings (new)</p> <p>1. Bar and Beer Garden</p> <p>10. Suite 15-16</p> <p>11. Suite 17-18</p> <p>12. Suite 19-20</p> <p>13. Suite 21-22</p> <p>14. Suite 23-24</p>	<p>15. Suite 25-26</p> <p>16. Suite 27-28</p> <p>17. Suite 29-30</p> <p>18. Suite 31-32</p> <p>19. Suite 33-34</p> <p>2. Restaurant</p> <p>20. Suite 35-36</p> <p>21. Suite 37-38</p> <p>22. Suite 39-40</p> <p>23. Suite 35-36</p> <p>24. Suite 41-42</p> <p>25. Suite 43-44</p> <p>26. Suite 45-46</p> <p>27. Suite 47-48</p> <p>28. Suite 49-50</p> <p>29. Suite 51-52</p> <p>3. Suite 1-2</p> <p>30. Suite 53-54</p> <p>31. Suite 55-56</p> <p>32. Suite 57-58</p> <p>33. Suite 59-60</p> <p>34. Suite 61-62</p> <p>35. Suite 63-64</p> <p>36. Suite 65-66</p> <p>37. Suite 67-68</p> <p>38. Suite 69-70</p> <p>39. Suite 71-72</p> <p>4. Suite 3-4</p> <p>40. Suite 73-74</p> <p>41. Suite 75-76</p> <p>5. Suite 5-6</p> <p>6. Suite 7-8</p> <p>7. Suite 9-10</p> <p>8. Suite 11-12</p> <p>9. Suite 13-14</p>	<p>c</p> <p>BAL-12.5</p> <p>BAL-19</p> <p>BAL-29</p> <p>BAL-40</p> <p>BAL-FZ</p> <p>BAL-LOW</p>	<p>A3.6 Private Drive 70m- km/h</p> <p>-Hydrants</p> <p>Hardstandings</p> <p>Local Government Authority</p> <p>State Roads</p>	<p>Other Roads</p> <p>DPIRD 2m Contours</p>
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Vegetation Classification

All vegetation within 100m of the site / proposed development was classified in accordance with Clause 2.2.3 of AS 3959-2018. Each distinguishable vegetation plot with the potential to determine the Bushfire Attack Level is identified below.

Photo ID: 28	Plot: 1	
Vegetation Classification or Exclusion Clause		
Class G Grassland		
Description / Justification for Classification		
Grassland of >100mm in Height Canopy Cover of 10-30% Understorey of Grasses Minimal surface, Near surface and Intermediate Fuel loads Arid/Semi Arid area		
Photo ID: 45	Plot: 1	
Vegetation Classification or Exclusion Clause		
Class G Grassland		
Description / Justification for Classification		
Grassland of >100mm in Height Canopy Cover of 10-30% Understorey of Grasses Minimal surface, Near surface and Intermediate Fuel loads Arid/Semi Arid area		
Photo ID: 65	Plot: 1	
Vegetation Classification or Exclusion Clause		
Class G Grassland		
Description / Justification for Classification		

Grassland of >100mm in Height
 Canopy Cover of 10-30%
 Understorey of Grasses
 Minimal surface, Near surface and Intermediate
 Fuel loads
 Arid/Semi Arid area



Photo ID: 74 **Plot:** 1

Vegetation Classification or Exclusion Clause

Class G Grassland

Description / Justification for Classification

Grassland of >100mm in Height
 Canopy Cover of 10-30%
 Understorey of Grasses
 Minimal surface, Near surface and Intermediate
 Fuel loads
 Arid/Semi Arid area



Photo ID: 42 **Plot:** 2

Vegetation Classification or Exclusion Clause



Excludable - 2.2.3.2 (e) (f) Low Threat
 Vegetation/Non Vegetated

Description / Justification for Classification

Maintained Areas
 Canopy Cover of Less than 10%
 Residential Areas
 Insufficient Fuels to increase the risk from
 bushfire
 Non-Vegetated Areas
 Irrigated gardens with low threat ground covers



Photo ID: 85 Plot: 2	 <p>8° N (T) • -20.73047, 116.809766 ±6 m ▲ 8m</p> <p>BAL WA Fire & Safety - DG Bayview Rd Park Karratha 19 Mar 2024, 2:23:18 pm</p>
Vegetation Classification or Exclusion Clause Excludable - 2.2.3.2 (e) (f) Low Threat Vegetation/Non Vegetated Description / Justification for Classification Maintained Areas Canopy Cover of Less than 10% Residential Areas Insufficient Fuels to increase the risk from bushfire Non-Vegetated Areas Irrigated gardens with low threat ground covers	
Photo ID: 90 Plot: 2	 <p>174° S (T) • -20.730372, 116.810478 ±3 m ▲ 8m</p> <p>BAL WA Fire & Safety - DG Bayview Rd Park Karratha 19 Mar 2024, 2:24:22 pm</p>
Vegetation Classification or Exclusion Clause Excludable - 2.2.3.2 (e) (f) Low Threat Vegetation/Non Vegetated Description / Justification for Classification Maintained Areas Canopy Cover of Less than 10% Residential Areas Insufficient Fuels to increase the risk from bushfire Non-Vegetated Areas Irrigated gardens with low threat ground covers	
Photo ID: 98 Plot: 2	 <p>144° SE (T) • -20.730816, 116.810029 ±5 m ▲ 7m</p> <p>BAL WA Fire & Safety - DG Bayview Rd Park Karratha 19 Mar 2024, 2:27:01 pm</p>
Vegetation Classification or Exclusion Clause Excludable - 2.2.3.2 (e) (f) Low Threat Vegetation/Non Vegetated Description / Justification for Classification Maintained Areas Canopy Cover of Less than 10% Residential Areas Insufficient Fuels to increase the risk from bushfire Non-Vegetated Areas Irrigated gardens with low threat ground covers	
Photo ID: 6 Plot: 3	

Vegetation Classification or Exclusion Clause Class G Grassland		 <p>200° S (T) • -20.731339, 116.809226 ±12 m ▲ 6m</p> <p>BAL WA Fire & Safety - DG Bayview Rd Park Karratha 19 Mar 2024, 2:01:08 pm</p>
Description / Justification for Classification Grassland of >100mm in Height Canopy Cover of 10-30% Understorey of Grasses Minimal surface, Near surface and Intermediate Fuel loads Arid/Semi Arid area		
Photo ID: 77	Plot: 3	 <p>302° W (T) • -20.730537, 116.808588 ±3 m ▲ 10m</p> <p>BAL WA Fire & Safety - DG Bayview Rd Park Karratha 19 Mar 2024, 2:19:12 pm</p>
Vegetation Classification or Exclusion Clause Class G Grassland		
Description / Justification for Classification Grassland of >100mm in Height Canopy Cover of 10-30% Understorey of Grasses Minimal surface, Near surface and Intermediate Fuel loads Arid/Semi Arid area		

Relevant Fire Danger Index

The fire danger index for this site has been determined in accordance with Table 2.1 or otherwise determined in accordance with a jurisdictional variation applicable to the site.

Fire Danger Index (WA is FDI of 80)

FDI 40

Table 2.4.5

FDI 50

Table 2.4.4

FDI 80

Table 2.4.3

FDI 100

Table 2.4.2

Determined Bushfire Impacts (on the day of the site assessment)

Table 1a shows the potential bushfire impact to the site / proposed development from each of the identified vegetation plots are identified below to the walls or supporting posts of the structure on the day of the assessment.

Due to the significant number of structures, ratings are individually shown in the BAL contour above.

Plot	Vegetation Classification	Effective Slope	Separation (m)	Highest BAL
1	Class G Grassland	0/Upslope	>30m	BAL – 12.5
2	Excludable – Clause 2.2.3.2 (e) & (f)	-	-	BAL – LOW
3	Class G Grassland	0-5 Downslope	>50m	BAL – LOW

Table 1: BAL Analysis

Determined Bushfire Attack Level (BAL)

The Determined Bushfire Attack Level (highest BAL) for the site / proposed development has been determined in accordance with clause 2.2.6 of AS 3959-2018 using the above analysis, that includes the Bushfire Contour Map.

BAL-12.5 (BAL Certificate 1)

Structures 1, 2, 3, 5, 6, 8, 9, 11, 12, 14, 15, 17, 18, 20, 21, 23, 24, 26, 27, 29, 30, 32, 33, 35, 36, 37, 38, 39, 40, 41.

BAL-LOW (BAL Certificate 2)

Structures 4, 7, 10, 13, 16, 19, 22, 25, 28, 31, 34.

Appendix 1: Plans and Drawings: Plans and drawings relied on to determine the bushfire attack level

Hotel and Restaurant

LAND USE 1. HOTEL

- 96 FAMILY HOTEL SUITES
(1 x QUEEN SIZED KING QUEEN LOWER, SINGLE UPPER BUNK BEDS)
- 16 EXECUTIVE HOTEL SUITES/ UA
(1 x KING SIZED BED AND UNIVERSAL ACCESS)
- 384 STANDARD HOTEL SUITES
(1 x QUEEN LONG BED)
- 444 DELUXE HOTEL SUITES
(1 x QUEEN LONG BED)
- RECEPTION (EXISTING)
- POOL (EXISTING) LICENCED
- BAR / BEER GARDEN(LICENCED)
- GYM
- GUEST LUGGAGE STORAGE (EXISTING)
- LAUNDRY (150 WASHER/DRYERS)
- CAR PARKS (5.5 X 2.7)
ON FREEHOLD: 514 CARPARK BAYS + 11 DISABLED CARPARK
ON DPLH: 194 CARPARK BAYS
ON DPLH:1 CARAVAN AND CAR PARKING BAYS
- INTENTIONALLY BLANK
- MEETING ROOM (EXISTING)
- CONVENIENCE STORE (EXISTING)
- MANAGER'S RESIDENCE (EXISTING)

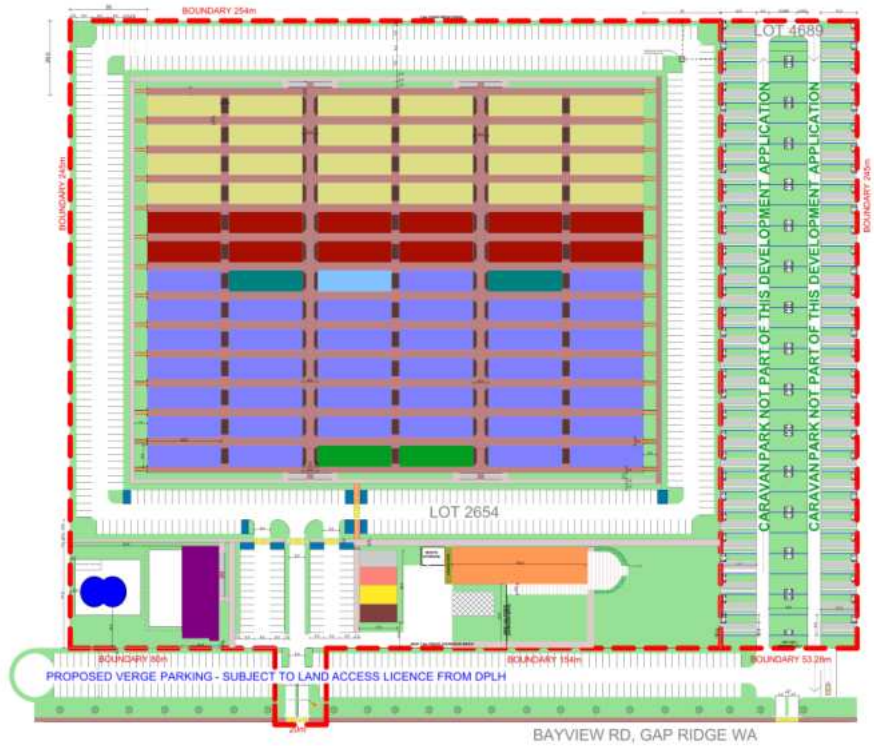
LAND USE 2. RESTAURANT

- RESTAURANT

LAND USE 3. CARAVAN PARK

- 85 CARAVAN SITES (14m x 8m)

SITE PLAN / PROPOSED LAND USES



DEVELOPMENT APPLICATION

PROJECT NAME: MIXED USE HOTEL AND RESTAURANT	DRAWING NO.: A1.0	DRAWING TITLE: SITE PLAN
PROJECT LOCATION: LOT 2654 BAYVIEW RD, GAP RIDGE WA	DRAWN BY: JB	SCALE: 1:500
		DATE: 08/03/2024

Appendix 2: Application of Shielding Provisions

AS3959-2018 c3.5 Shielding Provision applies as described and/or illustrated below:

Structures 1, 2, 3, 5, 6, 8, 9, 11, 12, 14, 15, 17, 18, 20, 21, 23, 24, 26, 27, 29, 30, 32, 33, 35, 36, 37, 38, 39, 40, 41 are BAL-12.5 in entirety.

Structures 4, 7, 10, 13, 16, 19, 22, 25, 28, 31, 34 are BAL-LOW in entirety.

Appendix 3: Additional Information and Advisory Notes

Excluded Vegetation (as3959 Clause 2.2.3.2):

Area contains plots that are maintained being excludable (e) and (f) low risk managed areas with APZ to 20m or lot sizes; these low-risk areas have been assessed and plotted on the map in white (plot 2).

APZ (Asset Protection Zone) or BPZ

APZ will be lot sizes upon completion, with all areas inside the lot being turned to carparking or managed gardens.

Topography

Area is mainly flat ground, with a downslope of no more than -5° to the west.

Recommendations for Landowner (FOLLOW THIS PROCEDURE!!)

1. Continued maintenance of the lot to the standard directed by the LGA firebreak and fuel notice (appendix 4) and,
2. Submission of the provided BAL Report and Certificate to the Local Government Authority (LGA) as soon as possible.
3. Provide any future documentation requested by the LGA including Bushfire Management Plans(BMP) or Statements (BMS).

It is the responsibility of the landowner/proponent to maintain their lot in accordance with the local government firebreak notice (LGA firebreak and fuel notice), issued under s33 of the Bushfires Act 1955.

Construction Requirements Advisory Statement:

All information given regarding construction requirements for the appropriate BAL Level from AS3959, within and outside this report is advisory only. A registered builder will be able to provide specific advice.

Statement from WAFS:

I Dwayne Griggs BPAD40466 of WA Fire & Safety, Maida Vale, have taken the appropriate steps to ensure that all the information provided in this Bushfire Attack Level Report is accurate and the correct determination of the site is given on the date of this assessment to current procedures defined by the FPAA.

Any further vegetation planted after the date of this BAL Assessment or a failure to maintain the area within this BAL Report to the same standards can dramatically change the BAL rating. This will put the structure and close structures at a higher risk in the event of extreme bushfire behaviour in the area.

It is highly recommended that the customer follows the recommendations outlined by the bushfire consultant for the subject lot, if the correct process is not adhered to this will impact costs, time, and the ability to complete the job in an effective manner.

This report does not guarantee that a structure will not be damaged or destroyed from a bushfire. This assessment is made from the information provided on site and available to me the Bushfire Consultant on the day of the assessment. The Bushfire Consultant will not be liable for loss or other consequences following a fire whether due to negligence arising from the services conducted by the consultant, local government authority, the agent requesting and or the owner/occupier.

Appendix 4: Standards for Asset Protection Zones (from SPP3.7)

An APZ is an area surrounding a building that is managed to reduce the bushfire hazard to an acceptable level. The width of the required APZ varies with slope and vegetation. The APZ should at a minimum be of sufficient size to ensure the potential radiant heat impact of a fire does not exceed 29kW/m² (BAL-29). It should be lot specific. Hazard separation in the form of using subdivision design elements (refer to E2) or excluded and low threat vegetation adjacent to the lot may be used to reduce the dimensions of the APZ within the lot.

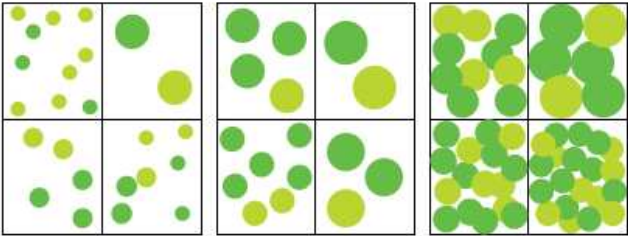
The APZ includes a defensible space which is an area adjoining the asset within which firefighting operations can be undertaken to defend the structure. Vegetation within the defensible space should be kept at an absolute minimum and the area should be free from combustible items and obstructions. The width of the defensible space is dependent on the space which is available on the property, but as a minimum should be 3 metres.

The APZ should be contained solely within the boundaries of the lot on which the building is situated, except in instances where the neighbouring lot or lots will be managed in a low-fuel state on an ongoing basis, in perpetuity. The APZ may make use of public roads, waterways, footpaths, buildings, rocky outcrops, golf courses, maintained parkland as well as cultivated gardens in an urban context, but does not include grassland or vegetation on a neighbouring rural lot, farmland, wetland reserves and unmanaged public reserves.

APZs can adversely affect the retention of native vegetation. Where the loss of vegetation is not acceptable or causes conflict with landscape or environmental objectives, such as waterway foreshore areas and wetland buffers, reducing lot yield may be necessary in order to minimise the removal and modification of remnant vegetation.

It is the responsibility of the landowner/proponent to maintain their APZ in accordance with Schedule 1 'Standards for Asset Protection Zones'. It is further recommended that maintenance of APZs is addressed through the local government firebreak notice, issued under s33 of the Bushfires Act 1954, and preferably included in a Bushfire Management Plan specifically as a how-to guide for the landowner.

SCHEDULE 1: STANDARDS FOR ASSET PROTECTION ZONES

OBJECT	REQUIREMENT
Fences within the APZ	<ul style="list-style-type: none"> Should be constructed from non-combustible materials (for example, iron, brick, limestone, metal post and wire, or bushfire-resisting timber referenced in Appendix F of AS 3959).
Fine fuel load (Combustible, dead vegetation matter <6 millimetres in thickness)	<ul style="list-style-type: none"> Should be managed and removed on a regular basis to maintain a low threat state. Should be maintained at <2 tonnes per hectare (on average). Mulches should be non-combustible such as stone, gravel or crushed mineral earth or wood mulch >6 millimetres in thickness.
Trees* (>6 metres in height)	<ul style="list-style-type: none"> Trunks at maturity should be a minimum distance of six metres from all elevations of the building. Branches at maturity should not touch or overhang a building or powerline. Lower branches and loose bark should be removed to a height of two metres above the ground and/or surface vegetation. Canopy cover within the APZ should be <15 per cent of the total APZ area. Tree canopies at maturity should be at least five metres apart to avoid forming a continuous canopy. Stands of existing mature trees with interlocking canopies may be treated as an individual canopy provided that the total canopy cover within the APZ will not exceed 15 per cent and are not connected to the tree canopy outside the APZ. <p data-bbox="608 969 1110 1025">Figure 19: Tree canopy cover – ranging from 15 to 70 per cent at maturity</p>  <p data-bbox="687 1301 1158 1323">15% 30% 70%</p>
Shrub* and scrub* (0.5 metres to six metres in height). Shrub and scrub >6 metres in height are to be treated as trees.	<ul style="list-style-type: none"> Should not be located under trees or within three metres of buildings. Should not be planted in clumps >5 square metres in area. Clumps should be separated from each other and any exposed window or door by at least 10 metres.
Ground covers* (<0.5 metres in height. Ground covers >0.5 metres in height are to be treated as shrubs)	<ul style="list-style-type: none"> Can be planted under trees but must be maintained to remove dead plant material, as prescribed in 'Fine fuel load' above. Can be located within two metres of a structure, but three metres from windows or doors if >100 millimetres in height.
Grass	<ul style="list-style-type: none"> Grass should be maintained at a height of 100 millimetres or less, at all times. Wherever possible, perennial grasses should be used and well-hydrated with regular application of wetting agents and efficient irrigation.
Defendable space	<ul style="list-style-type: none"> Within three metres of each wall or supporting post of a habitable building, the area is kept free from vegetation, but can include ground covers, grass and non-combustible mulches as prescribed above.
LP Gas Cylinders	<ul style="list-style-type: none"> Should be located on the side of a building furthest from the likely direction of a bushfire or on the side of a building where surrounding classified vegetation is upslope, at least one metre from vulnerable parts of a building. The pressure relief valve should point away from the house. No flammable material within six metres from the front of the valve. Must sit on a firm, level and non-combustible base and be secured to a solid structure.

Fine fuel load should be maintained to less than two tonnes per hectare, however this is often a subjective assessment. Reducing fuel load levels does not necessarily require the removal of existing vegetation. A combination of methods can be utilised to reduce fuel load such as raking, weed removal, pruning, mulching and/or the removal of plant material.

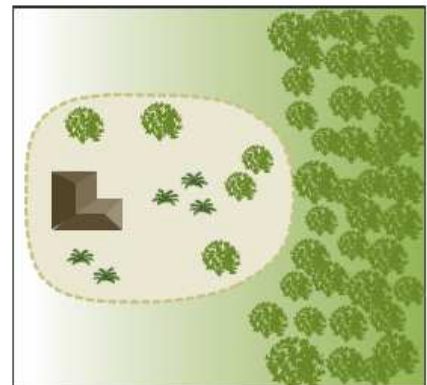
A simple method to estimate fuel load is to roughly equate one tonne of fuel load per hectare as 100 grams per square metre. For example, two tonnes per hectare of leaf litter is roughly 200 grams of leaf litter per square metre and eight tonnes per hectare is roughly 800 grams. Eucalyptus leaf litter is approximately 100 grams per handful, so two handfuls of litter per square metre will roughly equate to two tonnes per hectare. Different types of fine fuel, like mulch or pine needles may be more or less than a handful, however the 100 grams per square metre rule of thumb can still be used.

The landowner or proponent is responsible for maintaining an APZ in accordance with Schedule 1 - Standards for Asset Protection Zones. Ongoing maintenance of an APZ is usually enforced through the local government firebreak notice issued under section 33 of the *Bushfires Act 1954*, and/or through a condition of a development approval, which requires the implementation of measures identified within a BMP.

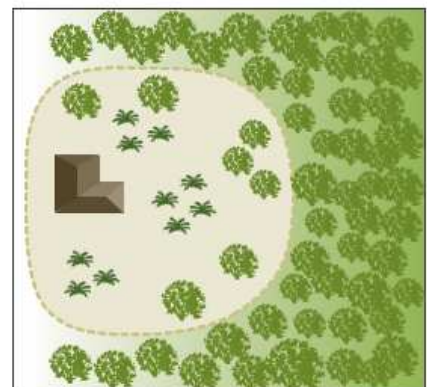
A copy of the firebreak notice and Schedule 1 should be included in a BMP specifically as a how-to guide for the landowner, and to demonstrate to decision-makers that the measures outlined in the BMP to achieve the appropriate BAL rating through provision and ongoing management of an APZ, can be implemented.

Regardless of whether an Asset Protection Zone exists in accordance with the acceptable solutions and is appropriately maintained, it should be noted that fire fighters are not obliged to protect an asset if they think the separation distance between the dwelling and vegetation is unsafe.

Hazard on one side



Hazard on three sides



Legend

-  APZ
-  trees
-  shrubs

Figure 18: Design of Asset Protection Zone

E2 Landscaping and design of an asset protection zone

Landscaping, design, and maintenance of an APZ in a bushfire prone area can significantly improve the bushfire resilience of a building. An APZ should not be seen as an area entirely cleared of vegetation, but as a strategically designed space that gives holistic consideration to how existing or proposed vegetation or non-combustible features interact with, or affect the building's bushfire resilience.

A well designed APZ provides a greater level of vegetation management within the first few metres of a building with, for example, less vegetation or inclusion of non-combustible materials. The vegetation within the remainder of an APZ can increase further away from the building with carefully considered plant selection and landscaping techniques.

Strategic landscaping measures can be applied, such as replacing weeds with low flammability vegetation (refer to E2 Plant Flammability) to create horizontal and vertical separations between the retained vegetation. The accumulation of fine fuel load from different plants is an important consideration for ongoing maintenance in accordance with Schedule 1. For example, when planting ground covers under deciduous trees within an APZ, the total fine fuel load prescribed in Schedule 1 will include any dead plant material from ground covers and leaf litter from the trees.

Plant density and final structure and form of mature vegetation should be considered in the initial landscaping stages. For example, clumps of sapling shrubs planted at a density without consideration of future growth, may increase the bushfire risk as a clump will quickly grow to exceed 5m². It should be noted that in some cases, a single shrub in a mature state may be so dense as to fill a 5m² clump alone.

The location of plants within an APZ is a key design technique. Separation of garden beds with areas of low fuel or non-combustible material, will break up fuel continuity and reduce the likelihood of a bushfire running through an APZ and subjecting a dwelling to radiant heat or direct flame contact. It is important to note, where mature trees are separated from a building by six metres, but the canopy has grown to extend or overhang a building, maintenance and pruning to remove the overhanging branches should be undertaken without the entirety of the tree being removed.

Mulches used within the APZ should be non-combustible. The use of stone, gravel, rock and crushed mineral earth is encouraged. Wood mulch >6mm in thickness may be used, however it is recommended that it is used in garden beds or areas where the moisture level is higher by regular irrigation. These materials could be sourced from non-toxic construction and demolition waste giving the added benefit of reducing the environmental impact of any 'hard landscaping' actions.

Combustible objects, plants, garden supplies such as mulches, fences made from combustible material, should be avoided within 10 metres of a building. Vines or climbing plants on pergolas, posts or beams, should be located away from vulnerable parts of the building, such as windows and doors. Non-flammable features can be used to provide hazard separation from classified vegetation, such as tennis courts, pools, lawns and driveways or paths that use inorganic mulches (gravel or crushed rock). Consider locating firewood stacks away from trees and habitable buildings.

Incorporation of landscaping features, such as masonry feature walls can provide habitable buildings with barriers to wind, radiant heat and embers. These features can include noise walls or wind breaks. Use of Appendix F of AS 3959 for bushfire resistant timber selection within areas of 29kW/m² (BAL-29) or below, or the use of non-combustible fencing materials such as iron, brick, limestone, metal post and wire is encouraged.

In addition to regular maintenance of an APZ, further bushfire protection can be provided at any time by:

- ensuring gutters are free from vegetation;
- installing gutter guards or plugs;
- regular cleaning of underfloor spaces, or enclosing them to prevent gaps;
- trimming and removing dead plants or leaf litter;
- pruning climbing vegetation (such as vines) on a trellis, to ensure it does not connect to a building, particularly near windows and doors;
- removing vegetation in close proximity to a water tank to ensure it is not touching the sides of a tank; and/or
- following the requirements of the relevant local government section 33 fire break notice, which may include additional provisions such as locating wood piles more than 10 metres from a building.

Preparation of a property prior to the bushfire season and/or in anticipation of a bushfire is beneficial even if your plan is to evacuate. As embers can travel up to several kilometres from a bushfire and fall into small spaces and crevices or land against the external walls of a building, best practice recommends that objects within the APZ are moved away from the building prior to any bushfire event. Objects may include, but are not limited to:

- door mats;
- outdoor furniture;
- potted plants;
- shade sails or umbrellas;
- plastic garbage bins;
- firewood stacks;
- flammable sculptures; and/or
- playground equipment and children's toys.

E2 Plant flammability

There are certain plant characteristics that are known to influence flammability, such as moisture or oil content and the presence and type of bark. Plants with lower flammability properties may still burn during a bushfire event, but may be more resistant to burning and some may regenerate faster post-bushfire.

There are many terms for plant flammability that should not be confused, including:

- Fire resistant – plant species that survive being burnt and will regrow after a bushfire and therefore may be highly flammable and inappropriate for a garden in areas of high bushfire risk.
- Fire retardant – plants that may not burn readily or may slow the passage of a bushfire.
- Fire wise – plants that have been identified and selected based on their flammability properties and linked to maintenance advice and planting location within a garden.

Although not a requirement of these Guidelines, local governments may develop their own list of fire wise or fire-retardant plant species that suit the environmental characteristics of an area. When developing a recommended plant species list, local governments should consult with ecologists, land care officers or environmental authorities to ensure the plants do not present a risk to endangered ecological communities, threatened, or endangered species or their habitat.

When selecting plants, private landholders and developers should aim for plants within the APZ that have the following characteristics:

- grow in a predicted structure, shape and height;
- are open and loose branching with leaves that are thinly spread;
- have a coarse texture and low surface-area-to-volume ratio;
- will not drop large amounts of leaves or limbs, that require regular maintenance;
- have wide, flat, and thick or succulent leaves;
- trees that have bark attached tightly to their trunk or have smooth bark;
- have low amounts of oils, waxes, and resins (which will often have a strong scent when crushed);
- do not produce or hold large amounts of fine dead material in their crowns; and/or
- will not become a weed in the area.



IMPORTANT FIRE MITIGATION NOTICE

ALL OWNERS AND/OR OCCUPIERS OF LAND SITUATED IN THE CITY OF KARRATHA

This is a requirement under the *Bush Fires Act 1954* Section 33. Failure to comply with this Notice may incur penalties of up to \$5,000 and the works required by this Notice will be carried out at the expense of the owner/occupier.

Pursuant to the powers contained in Section 33 of the *Bush Fires Act 1954*, you are hereby required on or before the 1st day of November, (or within fourteen days of your becoming owner or occupier of land should this be after the 1st day of November), or within fourteen days of you receiving this notice, to clear and maintain mineral earth breaks and reduce the fuel load from the land owned or occupied by you as specified hereunder and to have the specified land and firebreaks clear of all flammable material all year round.

LAND IN TOWNSITES- INCLUDING MINING AND OR CONSTRUCTION ACCOMMODATION FACILITIES

1.1 Where the area of land is 2000 square metres (approximately 1/2 an acre) or less, all flammable material must be reduced over the whole of the land. Grasses shall be slashed to a height 75mm.

1.2 Where the area of land exceeds 2000 square metres, mineral earth breaks of at least five (5) metres in width must be cleared of all flammable material immediately inside and along the boundaries of the land. Where there are buildings on the land additional mineral earth breaks five (5) metres in width must be cleared immediately surrounding each building.

1.3 Ensure a minimum vertical clearance of 4 metres is maintained along the firebreaks to enable vehicles to drive along the firebreaks without access being obstructed.

LAND OUTSIDE TOWNSITES INCLUDING MINING AND OR CONSTRUCTION ACCOMMODATION FACILITIES

2.1 For all buildings on land outside of the townsite, two mineral earth breaks with a width not less than five (5) metres and cleared of all flammable material must surround the buildings. The inner mineral earth break must be no less than twenty (20) metres from the perimeter of the building or group of buildings and the outer mineral earth break no less than one hundred (100) metres from the inner mineral earth break.

POWERLINES AND POWER TRANSMISSION LINES IN TOWNSITES INCLUDING MINING AND OR CONSTRUCTION ACCOMMODATION FACILITIES

3.1 Aerial hazards to power and power transmission lines must be maintained as per the guidelines issued by the Energy Safety - Department of Mines, Industry Regulation and Safety.

For power lines conducting less than or equal to 33,000 volts; ground fuels such as grasses and ground storey species must be cleared to a minimum of five (5) metres either side of a centre line created by the poles, or towers. The total cleared area must not be less than ten (10) metres wide and the entire area must be maintained to the standard of a mineral earth break.

3.2 For power transmission lines greater than 33,000 volts, a mineral earth break of not less than five (5) metres in width must be maintained either side of the widest point of any arms or cross arms on the pole or tower. A mineral earth break of no less than five (5) metres width is to be maintained directly under the power line corridor. All power and transmission lines are to be maintained as per Australian Standard AS7000, to assist in minimizing the risk from sparks or arcing and shall be the responsibility of the owner of the transmission line.

WATER SUPPLY PIPELINES AND INFRASTRUCTURE

4.1 All water supply pipelines and associated infrastructure must have mineral earth breaks not less than five (5) metres wide on both sides of the pipeline and all associated infrastructure and be cleared of all flammable material to prevent the spread of fire and damage to the pipelines or associated infrastructure. Access points must be installed and maintained to allow for Emergency Services access and maintenance use.

EXPLOSIVES MAGAZINES AND STORAGE AREAS

5.1 All Flammable Materials are to be removed to bare earth between any bunkers or storage facilities and all Flammable Materials are to be removed for a distance of not less than fifteen (15) metres from the perimeter of any such storage area.

FUEL DEPOT / FUEL STORAGE AREA / HAYSTACKS / STOCKPILED FLAMMABLE MATERIAL

6.1 For all fuel depots/fuel storage areas, all flammable matter within 10 metres of where fuel drums, fuel ramps or fuel dumps are located, and where fuel drums, whether containing fuel or not are stored, a mineral earth break of not less than five (5) metres in width must be installed immediately adjacent

6.2 For all haystacks/stockpiled flammable materials, a mineral earth break of not less than five (5) metres in width must be installed immediately adjacent to any haystacks or stockpiled flammable material.

RAILWAY RESERVES IN TOWNSITES

7.1 Mineral earth breaks of at least five (5) metres in width must be installed immediately inside all boundaries continuous with any railway reserve on which railway traffic operates and are the responsibility of the owner of the railway.

APPLICATION TO VARY FIREBREAK REQUIREMENTS

If you consider it to be impractical to clear a mineral earth break or remove flammable material as required by this Notice, you may apply to Council or its Authorised Officer no later than the 30th day of August, for permission to provide firebreaks in alternative positions or take alternative action to remove or abate fire hazards. If permission is not granted by Council or Authorised Officer, you must comply with the requirement of this Notice. An application must include a detailed map (google map or similar) of the area you intend to vary, outlining the variation you require, along with the reason for variation.

BURNING GARDEN REFUSE DURING LIMITED BURNING TIMES

9.1 A person must not burn garden refuse at a place (other than a rubbish tip) during the limited burning times for that place unless it is burned:

- (a) in an incinerator in accordance with subsection (2); or
- (b) on the ground in accordance with subsection (3).

9.2 Garden refuse burned in an incinerator is burned in accordance with this subsection where:

- (a) the incinerator is designed and constructed so as to prevent the escape of sparks or burning material; and
- (b) either
 - (i) the incinerator is situated not less than two (2) metres from any building or fence; or
 - (ii) if the incinerator is less than two (2) metres from a building or fence, the Council or its Authorised Officer has given written permission in writing for the incinerator to be used; and there is no flammable material within two (2) metres of the incinerator while it is in use; and

- (c) there is no flammable material within two (2) metres of the incinerator while it is in use; and
 (d) at least one person is present at the site of the fire at all times until it is completely extinguished; and
 (e) the fire is no longer required, the person ensures that the fire is completely extinguished by the application of water or earth.
- 9.3 The Council or Authorised Officer must not give permission under subsection 9.2
 (b) (ii) unless it is satisfied that the use of the incinerator is not likely to create a fire hazard.

ADDITIONAL WORKS

10.1 In addition to the requirements of this Notice, you may be required to carry out further works which are considered necessary by an Authorised Officer and specified by way of a separate written notice forwarded to the address of the owner/s as shown on the City rates record for the relevant land.

10.2 If the requirements of this Notice are carried out by burning, such burning must be in accordance with the relevant provisions of the Act.

10.3 Pursuant to Section 33(4) of the Act, where the owner and/or occupier of land fails or neglects to comply with the requisitions of this Notice within the times specified, the City may by its officers and with such servants, workmen and contractors, vehicles and machinery as the officers deem fit, enter upon the land and carry out the requisitions of this Notice which have not been complied with and pursuant to Section 33(5) of the Act, the amount of any costs and expenses incurred may be recovered from the owner and or occupier of the land.

10.4 Failing to comply with this notice may incur a modified penalty or prosecution. A person in default is also liable, whether prosecuted or not, to pay the cost of performing the work directed in this notice, if it is not carried out by the owner or occupier by the date required by this notice.

Implementing a new, nationally consistent Fire Danger Rating system.

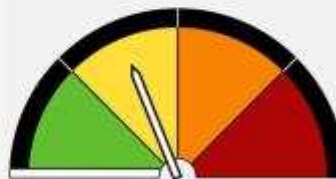
From 1 September 2022, Australia's Fire Danger Rating System will be improved and simplified to make it easier for you to make decisions to stay safe on days of fire danger risk.





The move to a simpler system is backed by improvements in science, which will mean we can better predict areas of greater risk on days of fire danger.

Across the country fire and emergency services are applying nationally consistent colours, signs and terminology. This means that wherever you go in Australia, and whatever the season or fuels you're surrounded with, you can understand the level of threat and what you need to do to stay safe.

Visit afac.com.au/initiative/afdrs for more information.

The new ratings are:



	Moderate Plan and prepare
	High Be ready to act
	Extreme Take action now to protect life and property
	Catastrophic For your survival, leave bushfire risk areas