BLACKASH
BUSHFIRE CONSULTING

Asset Protection Zone (APZ) Management Plan

Jindabyne Public School & Jindabyne High School

207 Barry Way, Jindabyne NSW 2627

Prepared for

NSW Department of Education

BPAD Bushfire Planning & Design Accredited Practitioner Level 3

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EXECUTIVE SUMMARY

This Asset Protection Zone Management Plan (APZMP) has been prepared for the new Jindabyne Public School and Jindabyne High School located at Lot 101//DP1019527 (the Site), in the Snowy Monaro Regional Local Government Area.

The Site has areas of both Woodland and Grassland vegetation which are mapped as bushfire prone vegetation that interface with the site. As a development on a bushfire prone site, careful consideration, planning and implementation of an appropriate suite of bushfire protection measures is crucial.

The APZMP focuses on the Asset Protection Zones (APZs) and Landscaping across the site, which form an integral part of the suite of protection measures for the site and school occupants.

Given the nature of the site, the development and the bushfire risk, the establishment of suitable APZs and appropriate landscaping are the key focus of the APZMP.

To provide direction and timing for mitigation works, the APZMP is presented as a Map and Works Plan. The identified APZ must be inspected at least annually to ensure appropriate fuel loads and compliance with the Conditions of Consent.

To ensure that regular reviews are undertaken, this APZMP and works plan has an operational life span of three (3) years. At the completion of this time period, the plan should be formally reviewed. Formal monitoring will be undertaken on an annual basis with an audit and certification of the works, in particular the condition of the APZ. This APZMP will enable the management of the Site, provide an understanding of the vegetated landscape, and manage fuels in accordance with the Conditions of Consent.

1. Introduction

This APZMP has been prepared by Blackash Bushfire Consulting Pty Ltd (Blackash) on behalf of the NSW Department of Education for the establishment and ongoing management of the APZs for the new Jindabyne Public School and Jindabyne High School located on the Site.

The addresses of the schools are as follows:

- Jindabyne Public School – 163A Barry Way, Jindabyne NSW 2627; and
- Jindabyne High School – 163B Barry Way, Jindabyne NSW 2627.

A school is recognised within the Rural Fires Act, 1997 (RF Act) and the NSW Rural Fire Service (RFS) document *Planning for Bushfire Protection 2019* (PBP) as a Special Fire Protection Purpose (SFPP) development and a vulnerable community. PBP identifies an SFPP development is one which is occupied by people who are considered to be at-risk members of the community. In a bushfire event, these occupants may be more susceptible to the impacts of bushfire.

In accordance with PBP, the APZ approved as part of the development application relied on the provision of APZs of sufficient size to provide 10kW of radiant heat at the future school buildings. The radiant heat and other forms of bushfire attack (ember and direct flame contact) is reduced by establishing and maintaining managed areas of APZs.

PBP defines an APZ as an APZ is a fuel-reduced area surrounding a building or structure (asset). It is located between the asset and the bushfire hazard vegetation. The APZ provides:

- a buffer zone between a bushfire hazard and an asset.
- an area of reduced bushfire fuel that allows for suppression of fire.
- an area from which backburning or hazard reduction can be conducted; and
- an area which allows emergency services access and provides a relatively safe area for firefighters to defend the property.

The bushfire fuels are reduced or removed within an APZ. This is so that the vegetation within the zone does not provide a path for the spread of fire to the building, either from the ground level or through the tree canopy. An APZ, if designed correctly and maintained regularly, will reduce:

- the risk of direct flame contact on the buildings.
- damage to the building asset from intense radiant heat; and
- ember attack.

This APZMP provides the new Jindabyne Public School and Jindabyne High School with a framework and guidance for the continued vegetation management within the site and the adjoining APZ. It is designed to clearly outline the areas of management, required management works and a plan of implementation for the next 3 years.

2. Background

Blackash were engaged by the NSW Department of Education to prepare a Bushfire Hazard Assessment report for the new school development, with the latest report identifying the applicable off-site APZ being Version 1.2 and dated 15th of October 2024. A letter prepared by Mr. Lew Short of Blackash and dated 25th of November 2024 was provided following an RFI from the NSW Rural Fire Service (RFS), which provided clarification for the APZ to the southwest (adjacent the Pony Club). Following consultation with the NSW RFS a revised 33.5m APZ was deemed supported. The revised 33.5m APZ to the southwest resulted in the APZ being reduced by 2.5m, and as a result no APZ or easement within the Pony Club land was required. The revised and current APZ map applicable to the development is included at Figure 3.

The Development Consent for the approved new schools states the following Conditions of Consent relevant to this APZMP (**D34**, **D35** and **A22**):

Condition **D35** of the Development Consent states:

> " ***Asset Protection Zones***
> ***D35****: Prior to the commencement of operation or other timeframe agreed by the Planning Secretary, landscaping of the site must be completed in accordance with landscape plan(s) listed in condition* ***A2(d)*** *and the property must be managed in accordance with the requirements in condition* ***A22***."

Condition ***A22*** *of the Development Consent states:*

> " ***Asset Protection Zones***
> ***A22:*** *From the commencement of building works and for the duration of the educational land-use, the entire leasehold area must be managed as an inner protection area in accordance with the following requirements of Appendix 4 of Planning for Bush Fire Protection 2019:*
> *(a) tree canopy cover should be less than 15% at maturity;*
> *(b) trees at maturity should not touch or overhang the building;*
> *(c) lower limbs should be removed up to a height of 2 m above the ground;*
> *(d) tree canopies should be separated by 2 to 5 m;*
> *(e) preference should be given to smooth-barked and evergreen trees;*
> *(f) large discontinuities or gaps in the shrubs layer should be provided to slow down or break the progress of fire towards buildings;*
> *(g) shrubs should not be located under trees;*

(h) shrubs should not form more than 10% ground cover;

(i) clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation;

(j) grass should be kept mown (as a guide, grass should be kept to no more than 100mm in height); and

(k) leaves and vegetation debris should be removed regularly.

*This must form part of a Landscaping Management Plan to ensure ongoing management of these APZs as required by condition **D34**."*

*Condition **D34** of the Development Consent states:*

*" **Asset Protection Zones***

***D34**: Prior to the commencement of operation, the Applicant must prepare a Landscape Management Plan to manage the revegetation and landscaping on-site and submit it to the Certifier. The plan must:*

a) describe the ongoing monitoring and maintenance measures to manage revegetation and landscaping; and

b) describe the measures to ensure the site is managed as an Inner Protection Area in accordance with the Bushfire Report in the EIS, prepared by BlackAsh Bushfire Consulting dated 11 January 2021, and updated by BlackAsh Bushfire Consulting dated 30 October 2022. Note: Where any inconsistency occurs between these reports, the report dated 30 October 2022 will prevail; and

c) be consistent with the Applicant's Management and Mitigation Measures at Section 9 Table 9-2 in the EIS;

*d) address the requirements of condition **A22.***

*~~e) be consistent with condition B40".~~ (**Deleted**)*

This APZMP has been determined having regard to the requirements as specified in PBP for the provision of APZs, the revised APZ map (Figure 3) and the development's Conditions of Consent (D34, D35 and A22).

In addition to the above, the NSW Department of Education as owners and managers of land have obligations under section 63 of the *Rural Fires Act, 1997 (RF Act)* to prevent the occurrence and spread of bushfire on or from their land. The NSW Department of Education also has broader management obligations to reduce the bushfire risk to adjoining properties.

2.1. Purpose of the APZ Plan

This APZMP has been prepared to provide the NSW Department of Education with clarity on the required APZs and associated works to establish and maintain the required APZs.

This APZMP has been prepared in accordance with the following published guidelines and standards:

- NSW Rural Fire Service (RFS) *Standards for Asset Protection Zones* (2005); and
- NSW RFS *Planning for Bushfire Protection* (2019).

This APZMP is the baseline plan for the implementation, ongoing management, monitoring and maintenance of the new Jindabyne Public School and Jindabyne High School APZs.

2.2. Management Aim & Objectives

The primary aim of the APZMP is to provide a working document that will outline the actions and procedures for the implementation and ongoing management of the APZs. This aim will be achieved through meeting the following objectives:

- To establish and maintain the approved APZs as per Figure 3;
- To ensure the APZ achieves the performance criteria set out under NSW RFS published documentation for APZ management (Standards for Asset Protection Zones, 2005);
- Provide a maintenance framework to ensure the APZ and Site vegetation management meets its performance criteria in perpetuity;
- Address the Site and APZ vegetation management requirements specified in the Conditions of Consent;
- Reduce the community's vulnerability to bushfires by improving its preparedness; and
- Manage fuels within the Site and on adjacent APZs to reduce the rate of spread and intensity of bushfires impacting on the Site.

3. Site Context & Description

The new Jindabyne Public School and Jindabyne High School are located within the area managed by Jindabyne Sport and Recreation Centre (JSRC), on independent Department of Education (DoE) land. The site is within the area designated by the Snowy Special Activation Precinct (Snowy SAP) as an area identified for growth and development.

The Jindabyne Public School will be located generally in the northern portion of the site whilst the new Jindabyne High School will generally be located in the south of the site. The primary school and high school will share a common visitor entry point to co-located school administration facilities. While the schools are inherently separate identities, with separate student entries, opportunities for integration are provided in a central shared plaza. This outdoor learning space is activated by the school canteen (shared) and separate core facilities including the primary school hall and library, and the high school gym and library, and provides opportunities for shared community use.

The Jindabyne Public School will provide for a Core 21 school. This will comprise of 20 home base units and 2 support learning units, administration and staff facilities, covered outdoor learning area (COLA), hall, staff and student amenities, out of school care facilities, library and special programs. Landscaped areas include active and passive open space play areas, and a games court.

The new Jindabyne High School will provide for a stream 2 high school. This is to comprise of general/specialised learning spaces and support learning units, administration and staff facilities, covered outdoor learning area (COLA), hall, staff and student amenities, library, an agricultural learning unit. Landscaped areas include active and passive open space play areas, a sports field and multipurpose games courts.

A dual access driveway is provided off Barry way Road along the western boundary of the site and through the private access road associated with the JSRC to the southern boundary of the site. The project also includes car parking, bus and private vehicle drop-off zones, and delivery zones.

The Jindabyne Public School will support the following maximum number of occupants:

- 415 students; and
- 43 staff.

The Jindabyne High School will support the following maximum number of occupants:

- 510 students; and
- 68 staff.

The site is approximately 9.5 ha in size, containing a former golf course and three existing workers cottages which were occupied during the construction of the Snowy Hydro Scheme. The site is undeveloped and contains scattered trees. Much of the surrounding land comprises remnant grassland, woodland and agricultural land.

The site is impacted on by Category 3 Bushfire Vegetation both internal and external the subject site (refer to Figure 2).

The new Jindabyne Public School and Jindabyne High School are located within the existing JSRC, which is a high performance and community sport centre located directly east of the site. The JSRC has a range of sporting facilities including a synthetic running track, cycling track, netball and tennis courts, fitness and indoor sports centres, and sporting ovals, as well as other services and accommodation facilities. The newly constructed BMX track is located directly east of the site and a new ski jump to the northeast.

The surrounding locality is generally rural in character with other land uses also including the Jindabyne Aero Club located to the west of the site on Tinworth Drive, an industrial area to the southwest and the Jindabyne Community recycling centre is located east of the JSRC.

3.1. APZs on Adjoining Lands

The APZMP provides for actions and responsibilities both within the Site and on the adjoining APZ to the north-east as shown in Figure 3. The proposed development and associated vegetation management within the Site and APZs reduces the bushfire risk to the adjoining properties. The appropriate management of the Site and adjoining APZ is therefore important to both to the Site occupants and also the properties adjoining the Site.

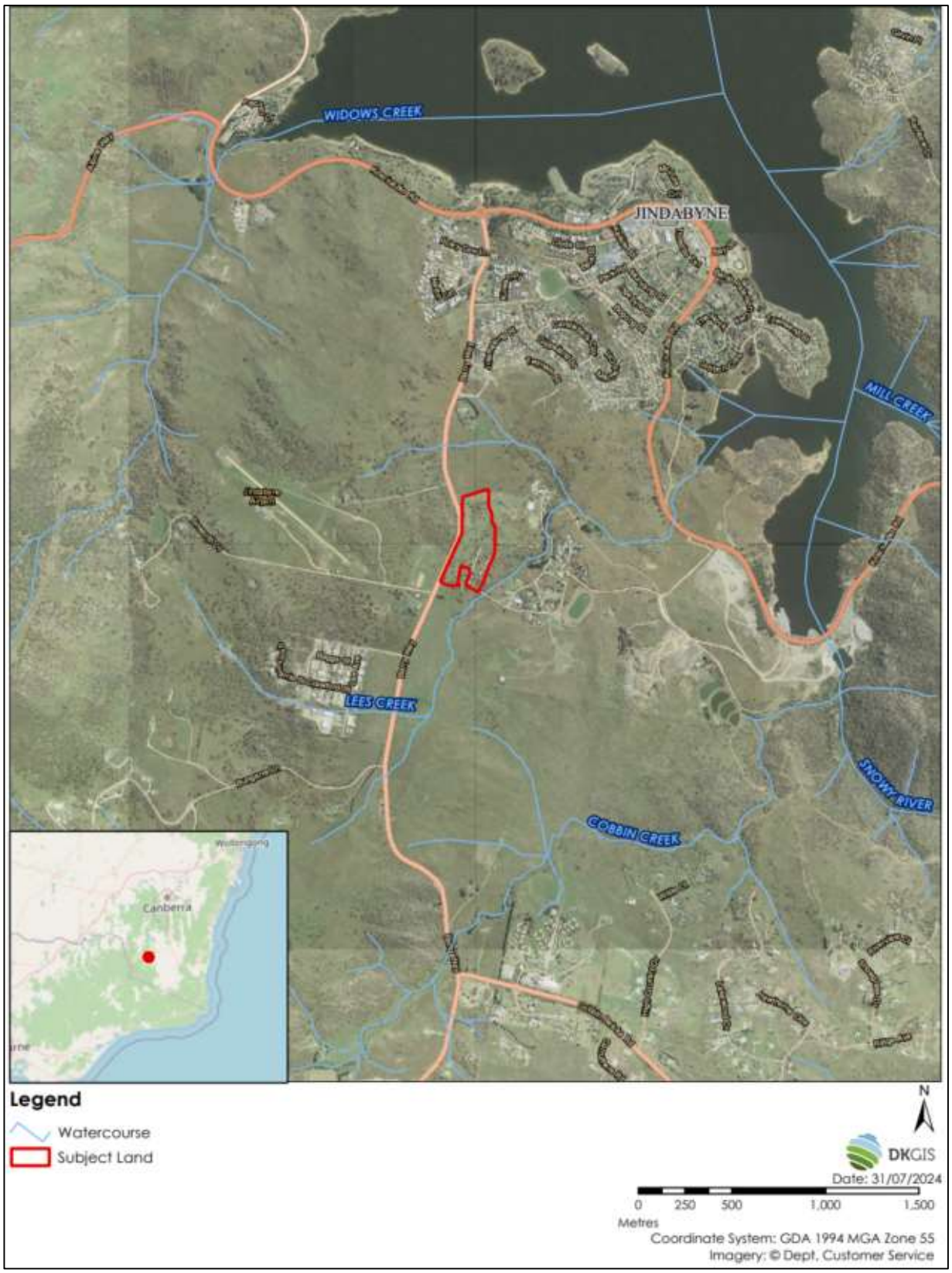

Figure 1: Site Location

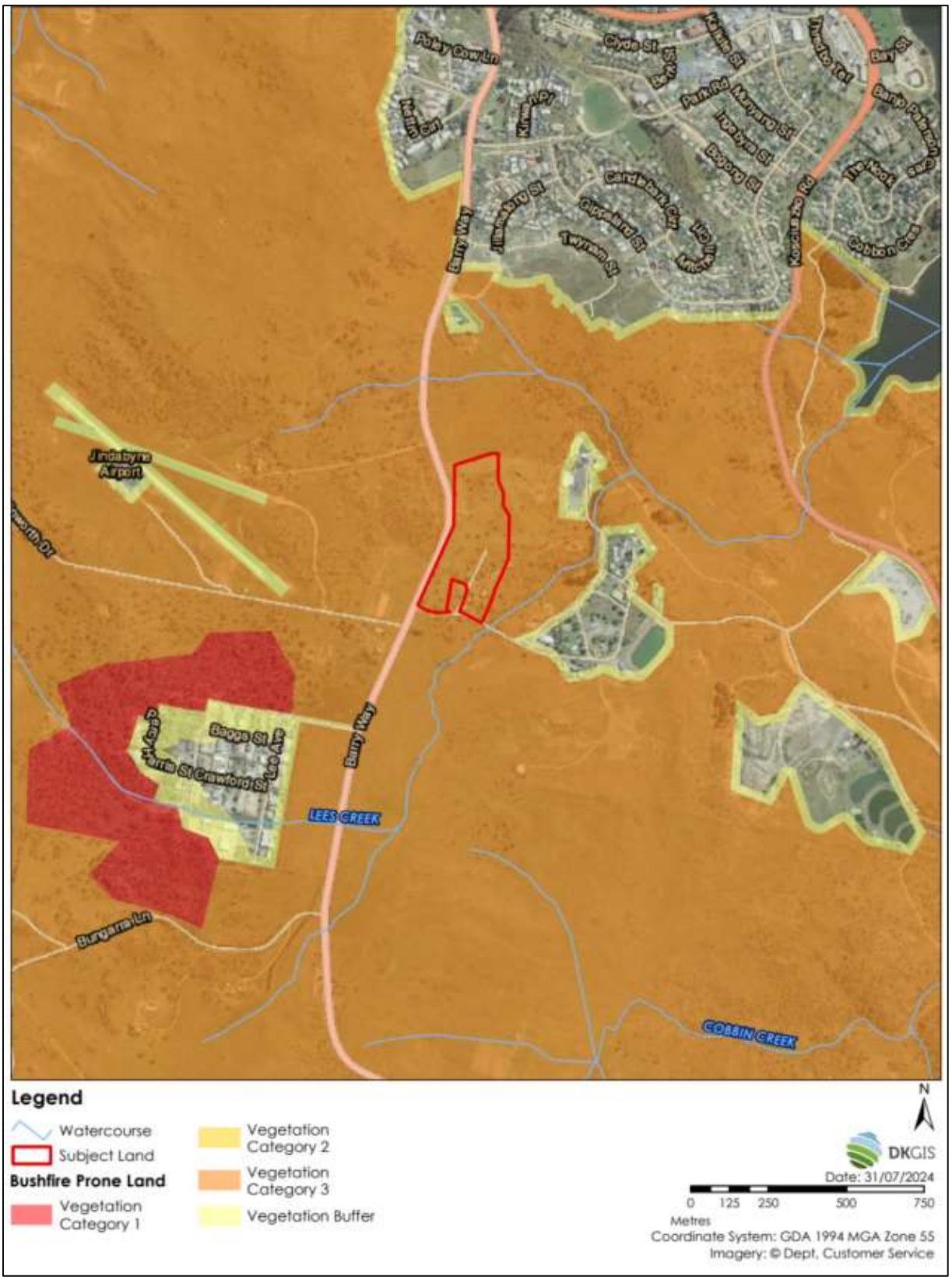

Figure 2: Bush Fire Prone Land

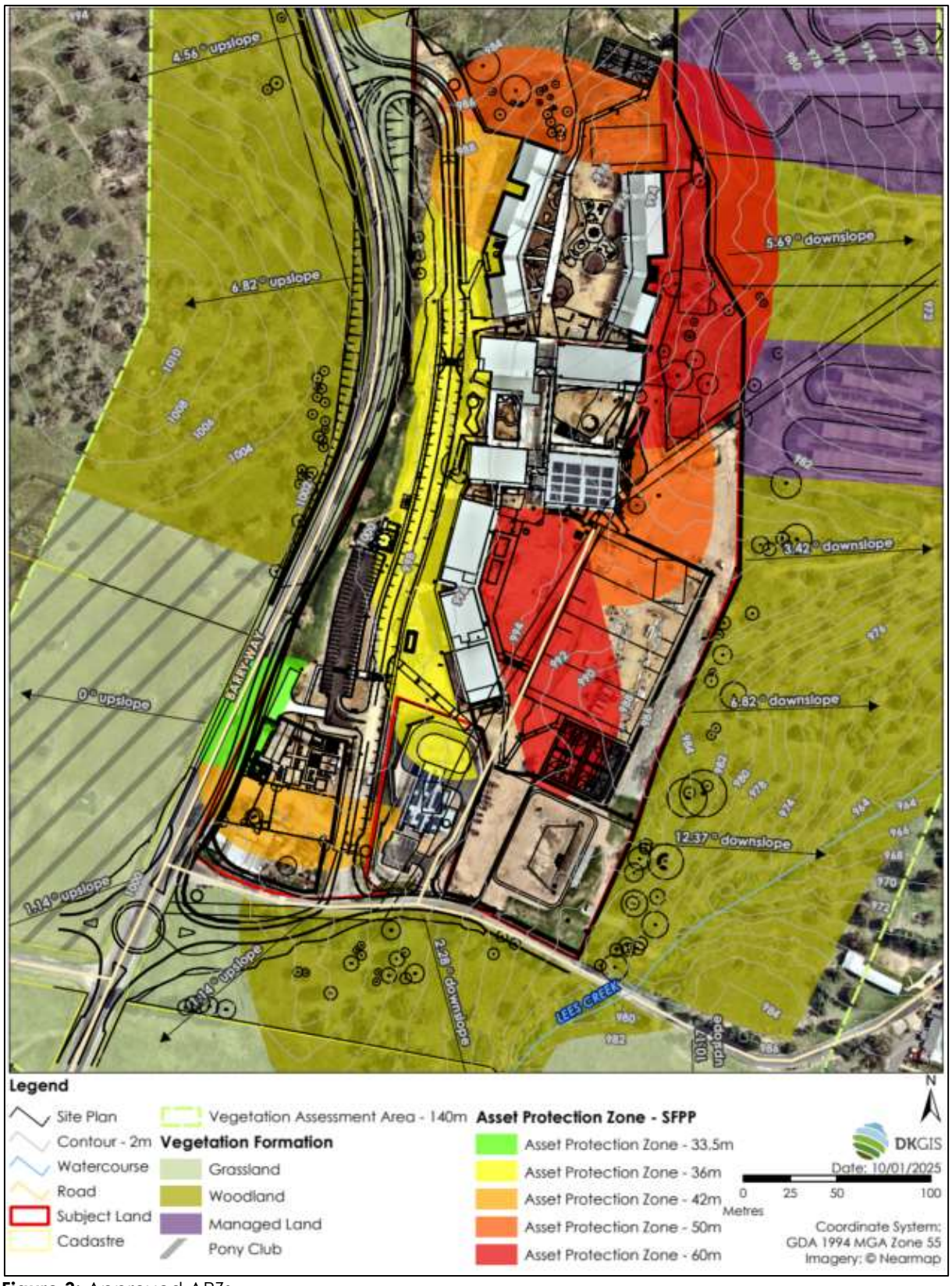

Figure 3: Approved APZs

4. APZ Management Requirements

The Site and adjoining APZ require vegetation management for the purpose of reducing bushfire fuel loads and fuel structure, such that the potential effect from a bushfire at the School's structures / assets / buildings is mitigated to an acceptable level. The APZs have been broken up into two (2) Bushfire Management Zones (refer to Figure 4):

- Management Zone 1: The Site – managed to Inner Protection Area (IPA) standards; and
- Management Zone 2: North-Eastern Adjoining APZ – managed to Inner Protection Area (IPA) standards.

The specifications for the IPA standards are provided at section 4.2 of this Plan.

For the determined APZs as per Figure 3, the off-site APZ to the south is located on the managed land of the adjoining TAFE and the off-site APZ to the south-west is located within the managed land of the adjoining Barry Way road corridor. As such, these sections of off-site APZs do not form part of this APZMP.

The APZs for the site have been determined by and are formally supported by Blackash.

4.1. Bushfire Management Zones

Management zones have been identified for the Site to prioritise and direct bushfire management actions. The zones are designed to ensure compliance with the Conditions of Consent, *Planning for Bush Fire Protection 2019* and the obligations under the *Rural Fires Act 1997*.

Given the nature of the site, two (2) zones (Figure 4) have been identified and each zone is required to be managed to IPA standards in accordance with Section 4.2 of this Plan. The management of the zones has been designed to ensure the area will perform appropriately as an APZ, whilst maximising the retention of trees and visual amenity.

Management Zone 1 – The Site

This management zone is already essentially an APZ, due to the extensive clearing and grubbing works performed during the construction of the project. A small number of trees are identified for retention to the north-east site boundary along Barry Way for ecological purposes. No tree removal or tree pruning is required within the area identified for retention. The primary APZ works required in this area include:

- Removal of fine fuels/litter leaf and debris, slashing to below 100mm, and retention of live roots/ground cover (for erosion management); and
- All weeds species to be removed.

Reference photos taken during Site inspection on the 13.10.2023:

Photo 1: Looking south-east at the cleared Site.

Photo 2: Looking north towards Barry Way at the trees identified for retention.

Reference photos taken during Site inspection on the 24.07.2024:

Photo 1: Looking north-east at the new garden and school oval

Photo 2: Looking west towards Barry Way at the trees identified for retention.

Management Zone 2 – North-Eastern Off-Site APZ

This management zone contains predominantly Grassland vegetation with a few small trees, which will require ongoing management to the IPA standards. No tree removal or tree pruning is required within the adjoining APZ. The primary APZ works required in this area include:

- Removal of fine fuels/litter leaf and debris, slashing to below 100mm, and retention of live roots/ground cover (for erosion management); and
- All weeds species to be removed.

Reference photos taken during Site inspection on the 13.10.2023:

Photo 1: Looking east at the adjoining APZ area from the site boundary.

Photo 2: Looking south-east at the adjoining APZ area from the site boundary.

Reference photos taken during Site inspection on the 24.07.2024:

Photo 1: Looking north-east at the adjoining APZ area from the site boundary.

Photo 2: Looking east at the adjoining APZ area from the site boundary.

Figure 4: Bushfire Management Zones

4.2. IPA specification

The IPA is the area closest to the asset / building and creates a fuel-managed area which can minimise the impact of direct flame contact and radiant heat on the development and act as a defendable space for attending firefighting operations. Vegetation within the IPA should be kept to a minimum level. Litter fuels within the IPA should be kept below 1cm in height and be discontinuous. In practical terms the IPA is typically the curtilage around the building, consisting of a mown lawn and well-maintained gardens (in the case of this site, a well-maintained landscape).

For the development buildings on the Site, vegetation should not be located in close proximity to windows.

All vegetation within the Site and adjoining APZ is to be managed as an Inner Protection Area (IPA) in accordance with the requirements of Appendix 4 of Planning for Bushfire Protection 2019. When establishing and maintaining an IPA, the following standards apply:

Table 1: IPA Standards

Stratum	APZ Standard
Trees	• Tree canopy cover should be less than 15% (at maturity) • trees (at maturity) should not touch or overhang the building • lower limbs should be removed up to a height of 2m above ground • tree canopies should be separated by 2 to 5m • preference should be given to smooth barked and evergreen trees.
Shrubs	• create large discontinuities or gaps in the vegetation to slow down or break the progress of fire towards buildings • shrubs should not be located under trees • shrubs should not form more than 10% ground cover • clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.
Grass	• grass should be kept mown (as a guide grass should be kept to no more than 100mm in height) • leaves and vegetation debris should be removed.

4.3. APZ Maintenance Criteria

The Site and adjoining APZs are required to be managed in perpetuity to ensure ongoing protection to the School buildings from the impact of bushfires. Vegetation management to IPA standards as described above should be undertaken regularly, particularly in advance of the bushfire season. The APZ should be reviewed and certified annually by a suitably qualified bushfire consultant, prior to the commencement of the Bushfire Danger Period which is generally 1 October in each year.

4.4. Development Consent

Development Approval was issued for the development on the 10 August 2022. The Approval Document provides Conditions of Consent (D34, D35 and A22), refer Section 2 of this plan, for the implementation and ongoing vegetation management within the Site to IPA standards.

With the implementation of this APZMP into the Site's overall Landscaping Management Plan, this APZMP is prepared in accordance with the Conditions of Consent; D34, D35 and A22.

5. Landscaping Design and Management

The landscaping within the Site and adjoining APZ must be designed and implemented in accordance with the IPA standards as per Section 4.2 of this plan. Landscaping, particularly adjacent to buildings, plays a vital role in the effectiveness of the APZ and the survivability of the buildings. In combination with other measures, landscaping, if designed appropriately, is a simple means to implement an APZ and significantly improves the resilience of the site.

Appropriate landscaping involves planning, designing, planting and managing the Site and adjoining APZ. The aim is to keep the area adjacent to the buildings free of plants and other materials that can easily catch fire and then ignite the building. In order to achieve a suitable landscaped area for bushfire protection, the following factors need to be considered:

a) Bushfire impact on Buildings

Buildings are impacted by bushfires through a number of mechanisms, but most importantly when designing the landscaping; ember attack, radiant heat and direct flame contact.

- **Ember attack** – the majority of buildings burnt down during a bushfire are the result of ember attack. Ember attack occurs when small burning twigs, leaves and bark are carried by the wind, and land ahead of the fire. If these burning embers land on or near flammable materials, such as leaf litter and dead plant matter, outdoor furniture, wood piles, etc, they can develop into spot fires. These spot fires can then impact directly on buildings. Embers can also ignite a building directly if they land on or near vulnerable parts of the building.
- **Radiant heat** - is the heat created from a bushfire. Radiant heat can:
  - ignite surfaces without direct flame contact or ember attack. This is due to the heat being received from the fire;
  - dry out vegetation ahead of the bushfire so that it burns more readily;
  - crack and break windows, allowing embers to enter a building; and
  - distort and melt materials such as plastics.
- **Flame contact -** occurs when flames from the bushfire directly touch or engulf a building. Any burning vegetation can directly ignite a building if it is planted too close.

b) Defendable Space

An area adjoining a building that is managed to reduce combustible elements and is free from constructed impediments. It's a safe working environment in which firefighters can defend a building before and after the fire front has passed.

c) Location of plants, trees, gardens, etc

Poorly located vegetation that is likely to burn may expose the building to increased levels of radiant heat and flame contact. Ultimately, effective APZ, building construction, water and access can all be compromised by inappropriate or poorly maintained landscaping.

The landscaping design must carefully consider the placement of garden beds, trees and other vegetation to reduce the bushfire risk to the building. Flammable garden materials (such as trees, shrubs and fences) should not be located in close proximity to windows, doors, decks, pergolas and eaves.

There are a number of things that can be done to support this, including:

- Locate non-flammable surfaces (such as paths, driveways and paved areas) against the buildings;
- Do not plant trees that are close to the buildings, so they do not cause damage if they fall. They must not overhang the buildings and ideally should be located 1.5 times their mature height from the buildings;
- Maintain grass within the APZ to no more than 10cm in height;
- Use non-combustible, moveable containers and pots that can be relocated in the summer periods; and
- Do not store other flammable objects from around the buildings. These include, outdoor furniture, barbeques, gas bottles and wood piles.

d) Plant Flammability

Some plants are more flammable than others but all plants in a garden – living and dead – can provide fuel for a bushfire. Plant flammability is described as a combination of:

- the time taken for a plant to ignite;
- how readily it burns when the ignition source is removed;
- how much material there is to burn; and
- how long it takes for all available fuel to be consumed.

Flammability will vary depending on:

- a plant's age, health, physical structure and chemical content;
- the daily and seasonal climatic variations;
- location of the plant in relation to other vegetation and flammable objects; and
- the specific part of a plant – some parts of plants are also more flammable than others.

e) Fuel Continuity

One of the most effective ways to reduce the spread of fire within a garden is to create separation between plants, garden beds and tree canopies.

Fire spreads easily when plants are located close together as this creates continuity of fuel for the fire to progress. Grouping plants and garden beds with areas of low fuel between them can help avoid this by breaking up fuel continuity. Fuel continuity should be reduced by:

- Locate any shrubs or other flammable objects away from trees. If planted under trees, vegetation can act as a ladder fuel and carry fire into canopies;
- Locate shrubs and trees so that they do not form a continuous canopy and are separated by areas of low fuel;
- Use non-flammable surfaces (paths etc) and mown grass to provide separation and areas of low fuel between plant groupings and garden beds; and
- Pruning branches to a minimum of 2 metres above the ground. This increases the vertical separation between fuel at ground level and the canopy.

Trees can be useful during a bushfire, provided they are selected carefully, properly maintained and located at a safe distance from the buildings.

f) Ongoing Maintenance

Regular maintenance of all landscaped areas must be carried out regularly and should be included as part of overall preparation for bushfire. Regular maintenance actions should include:

- Clear ground fuel from underneath plants, on and around the buildings;
- Prune plants with low-hanging branches, providing separation of at least 2 metres above the ground;
- Replace plants that die or become diseased;
- Keep garden beds well hydrated through watering;
- Remove any flammable objects from the APZ;
- Remove any fine, dead material that might accumulate in plants; and
- Remove weeds from all garden areas and adjacent to buildings.

6. APZ Works Plan

The required APZ works should be carried out in the following sequence:

1. Delineate the adjoining APZ that is required for ongoing vegetation management;
2. Identify and remove weeds;
3. Ground fuel management (removal of fine fuels/litter leaf and debris, slashing to 100mm, and retention of live roots/ground cover for erosion management).

6.1. Tree Removal or Pruning

There are no trees required for removal or pruning within the Site or adjoining APZ to meet IPA standards.

6.2. Works Plan

A works plan is included at Appendix 1, which provides the schedule of works and general specifications that will demonstrate APZ compliance for the two Bushfire Management Zones. The works plan is consistent with the Conditions of Consent and requirements of Planning for Bushfire Protection 2019:

- The means necessary to complete the management required;
- A schedule for monitoring and maintenance to occur to ensure the APZ is regularly managed, and
- The relevant body responsible for actions.

7. Maintenance & Reporting

7.1. Maintenance

Adequate and regular maintenance of the APZs, to the prescribed IPA standards, is critical to its ongoing effectiveness. Issues that can affect the APZ performance include:

- Regrowth canopy and limbs (over time can reduce separation between canopies and from the ground);
- Regrowth trees and shrubs (e.g. from coppices); and
- Seasonal development and accumulation of surface and elevated fuels such as fallen limbs/branches, leaves and bark, regrowth grasses and low shrubs.

After the initial works to create the APZs are completed, follow up maintenance over the Site and adjoining APZ will be more readily identifiable, and can be done manually (mow, slash, brush-cut, saw limbs and branches, and manual removal).

Ongoing maintenance will be required at least twice annually as standard landscape maintenance works and additional works based on any issues identified in the monitoring assessment and reporting.

7.2. Reporting

It is recommended that an APZ inspection be performed on completion of the APZ works and prior to occupation of the Site. The APZ inspection should be conducted and documented by a qualified bushfire consultant with relevant experience in APZ and landscape management.

Annual APZ inspections should be conducted in perpetuity, prior to the annual bushfire danger period (e.g., September) each year. These reports should be kept on record for a 12-month period until superseded by the following APZ Monitoring Report.

8. References

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Appendix 1: APZ Works Plan

Item	Action Required/Performance	Timing	Responsibility
ESTABLISHMENT			
Determine and map APZ	Map of site showing the extent of APZs required.	Prior to works commencing	Blackash
Identify off-site APZ	Formally identify the extent of the off-site APZ.	Prior to APZ works	SINSW
Delineate off-site APZ (if applicable)	Delineate the off-site APZs so that works are restricted to the extent of the APZ area (if applicable).	Prior to APZ works	SINSW
Confirm safe work area	At completion of APZ identification and/or delineation, APZ Contractor to assess the APZ areas and make sure they are safe, which includes all required OH&S procedures and documentation (SWMS).	Prior to APZ works	Contractor
Ground and Shrub Clearing	Shrubs and ground fuel to be removed / managed as per Section 4.2: • shrubs should not be located under trees; • shrubs should not form more than 10% ground cover; • Shrubs should not form continuous canopy; • grass should be kept mown (as a guide grass should be kept to no more than 100mm in height); and • Leaf and other debris removed as required.	APZ construction	Contractor
APZ Inspection	Inspection of APZ areas and issue of APZ Certificate to certify that: • Ground and shrub layers are managed in accordance with APZ requirements.	On completion of the APZ works and prior to occupation	Blackash

MONITORING			
APZ Monitoring	Ongoing monitoring to ensure fuel loads and vegetation structure meet IPA standards. Ongoing fuel management to be monitored annually within: • August -September prior to maintenance works. A report should be completed at each inspection and identify whether further maintenance is required.	Annually (August-September prior to bushfire season)	Blackash
APZ Monitoring Report	An APZ monitoring report will be issued at the completion of each monitoring event. Reports should be kept on record for a 12-month period until superseded by the following years report.	Annually (September prior to bushfire season) - following creation of the APZ	Blackash
MAINTENANCE			
APZ Maintenance	• Overstorey canopy cover of 15% or less. • Tree canopies should be separated by 2 to 5 metres. • Shrubs should form no more than 10% of ground cover. • Shrubs should not form continuous canopy. • Groundcover to be kept mown (indicatively no more than 100mm height). • Leaf and other debris removed as required.	Twice annually for first 3 years following creation of the APZ. APZ Maintenance completed each year within: • August - September; and • March - April.	Maintenance Contractor
Maintenance Report	• The maintenance contractor can sign off the maintenance and present as a maintenance report, post works.	Twice annually for first 3 years following creation of the APZ.	Maintenance Contractor