DEVELOPMENT AND CONSTRUCTION OF CLASS 9 BUILDINGS THAT ARE SPECIAL FIRE PROTECTION PURPOSE DEVELOPMENT ON BUSH FIRE PRONE LAND

Guidance document **17 March 2025**

Introduction

This document provides guidance to planners, fire authorities, councils, certifiers and developers regarding the construction of Class 9 Special Fire Protection Purpose (SFPP) buildings on bush fire prone land. This includes the:

1. application of the Addendum published in January 2025 (Addendum 2025) to *Planning for Bush Fire Protection 2019* (PBP 2019);
2. bush fire inputs required for S43C9 (internal tenability) and S43C14 (Vehicular access) as referred to in Section G5D4 of Part G5 of the National Construction Code 2022 (NCC 2022); and
3. bush fire inputs recommended to meet the performance criteria of G5P2 of NCC 2022 when the bush fire attack level (BAL) exceeds BAL 12.5.

Legislative context

The National Construction Code 2022

Construction captured by Part G5 – designated bushfire prone areas

Part G5 of the NCC 2022 is applicable to construction of buildings on designated bushfire prone areas. Designated bushfire prone areas are defined within the NSW variation of the NCC 2022 to mean land that has been designated under legislation; or has been identified under an environmental planning instrument, development control plan or in the course of processing and determining a development application, as land that can support a bushfire or is likely to be subject to bushfire attack.

The definition of designated bushfire prone area will therefore capture bush fire prone land, being land designated on a bush fire prone land map certified by the Commissioner of the NSW Rural Fire Service (RFS) in accordance with section 10.3 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Where the subject building(s) is to be constructed on land mapped as bush fire prone (that is, within mapped Category 1, 2 or 3 Vegetation or the Vegetation Buffer), the construction is captured by Part G5 of the NCC.

SFPP Development

Part G5 of the NCC 2022 sets out additional construction, separation and access requirements for certain buildings on bushfire prone land including Class 2, Class 3, Class 9 and Class 10 buildings that accommodate vulnerable occupants. Class 9 buildings include some SFPP developments that fall under section 100B of the *Rural Fires Act 1997* (RF Act), such as a Class 9a health-care building, Class 9b early childhood centre, Class 9b primary or secondary school and Class 9c residential care building.

Clause G5D4 of NCC 2022 is a deemed-to-satisfy (DTS) provision applicable to scenarios where the BAL at the building does not exceed BAL 12.5. G5D4 of NCC 2022 provides that in a designated bushfire prone area, a Class 9 building that is an SFPP must comply with Specification 43 except as amended by PBP.

Specification 43 sets out bushfire protection measures (BPMs) for buildings described in clause G5D4. Aside from the scope provision (S43C1), and S43C2 which does not apply in NSW, twelve provisions of Specification 43 apply in NSW.

Clauses G5P1 and G5P2 of NCC 2022 contain the performance requirements required to be met for certain Class 9 buildings where the BAL at the building exceeds BAL 12.5 or where the DTS requirements cannot be met.

Addendum 2022

The RFS amended PBP 2019 by way of an Addendum in November 2022 (Addendum 2022). The Addendum adopted and aligned PBP 2019 to three provisions from Specification 43 of the NCC 2022 including:

- S43C10 Building envelope
- S43C11 Supply of water for fire-fighting purposes
- S43C14 Vehicular access

The remaining nine provisions of Specification 43 were not addressed in the Addendum, including S43C9 (internal tenability).

The RFS issued a Practice Note in May 2024 to provide guidance on the application of Addendum 2022 to PBP 2019.

Addendum 2025

Addendum 2025 alters two specifications in Specification 43 of the NCC 2022 for primary and/or secondary school buildings which meet a specific criteria. Specifically, it:

1. Amends provisions S43C9 (internal tenability) and S43C14 (Vehicular access) in Specification 43 as referred to in Section G5D4 of the NCC (NSW) for school buildings.
2. Amends Appendix B of PBP Addendum 2022 in relation to vehicular access by removing the applicability of the specific requirements in Table 3 (SFPP Development Access – Specific Requirements) for school buildings.

The purpose of these amendments is to facilitate the construction of new and planned schools. More detail on the alterations to the specifications within Specification 43 is set out below.

Addendum 2025 only applies to construction of buildings which are primary and/or secondary school buildings and are BAL 12.5 and below.

Internal tenability – S43C9 of Specification 43

The amendment to the internal tenability requirements for school buildings within S43C9 made within Addendum 2025 only applies to particular construction scenarios which have been assessed as lower exposure. In these lower exposure scenarios, Addendum 2025 operates such that the requirements of S43C9 are removed.

Where requirements of S43C9 apply

The requirements of S43C9 still apply in a DTS assessment under G5D4 in situations where the proposed primary or secondary school building is within proximity to larger areas of higher hazard vegetation. In these situations, it is expected that the fire will burn for longer and have a fully developed fire front.

Specifically, the requirements of S43C9 apply in the following scenarios. When the proposed primary or secondary school building is within 100 metres (m) of land, that is categorised as Vegetation Category 1 on a bush fire prone land map, and the area of land categorised as Vegetation Category is:

- > 5 hectares (ha) in size and is not a corridor with a width of 120 m or less at its widest (see **Figure 1**); or
- < 5 ha in size and is within 100 m of another area of land categorised as Vegetation Category 1 which is > 5 ha in size and is not a corridor with a width of 120 m or less at its widest point (see **Figure 2**).

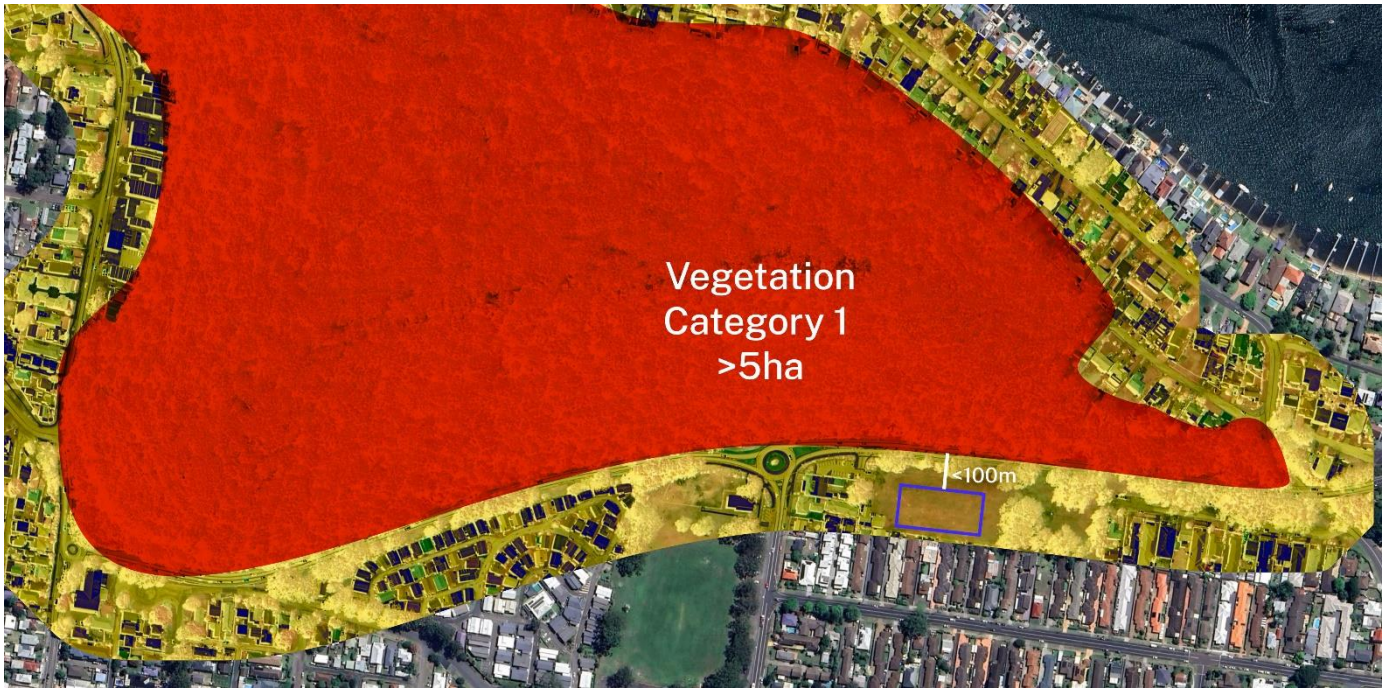


Figure 1: Example 1 of where alterations to S43C9 within Addendum 2025 do not apply.

Note: the blue box indicates the building footprint.

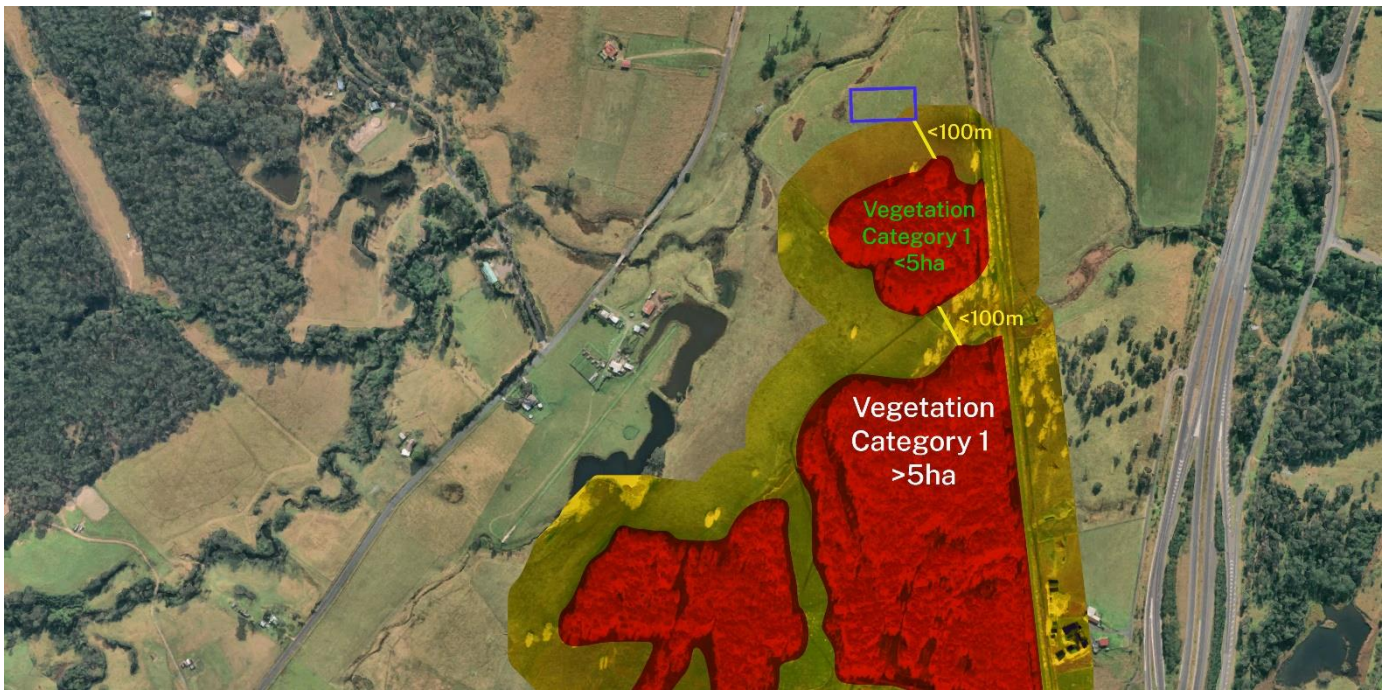


Figure 2: Example 2 of where alterations to S43C9 within Addendum 2025 do not apply.

Note: the blue box indicates the building footprint.

Where requirements of S43C9 do not apply

The requirements of S43C9 do not apply when the proposed primary or secondary school building is further away from significant patches of higher hazard vegetation. In these situations, any fire near the building is expected to either burn out quickly or not develop into a fully developed fire front.

Specifically, S43C9 does not apply when the proposed building is within 100 m of land that is categorised as Vegetation Category 1 on a bush fire prone land map and the land categorised as Vegetation Category 1 is:

- < 5 ha in size and is not within 100 m of another area of land categorised as Vegetation Category 1 which is > 5 ha in size (see **Figure 3**); and/or
- a corridor with a width of <120 m at its widest point which is not within 100 m of another area of land categorised as Vegetation Category 1 which is > 5 ha in size (see **Figure 4**).

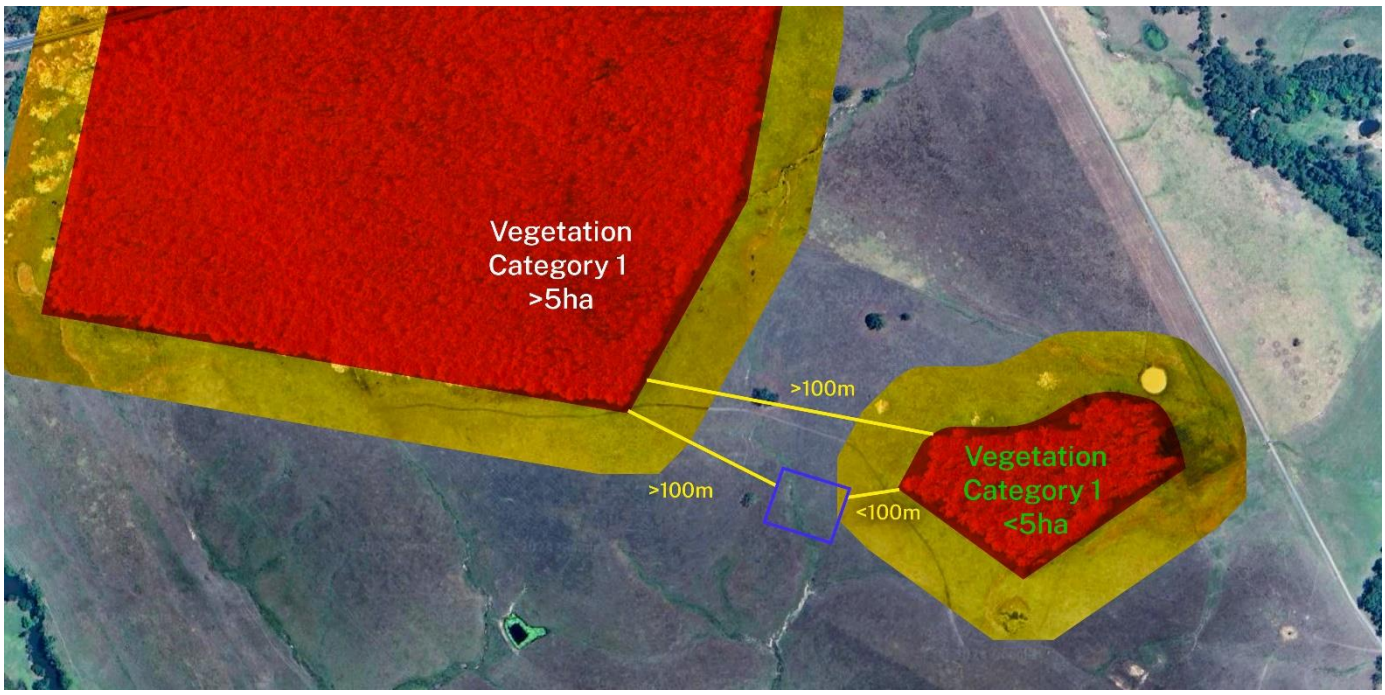


Figure 3: Example 1 of where provision S43C9 of NCC 2022 does not apply.

Note: the blue box indicates the building footprint.

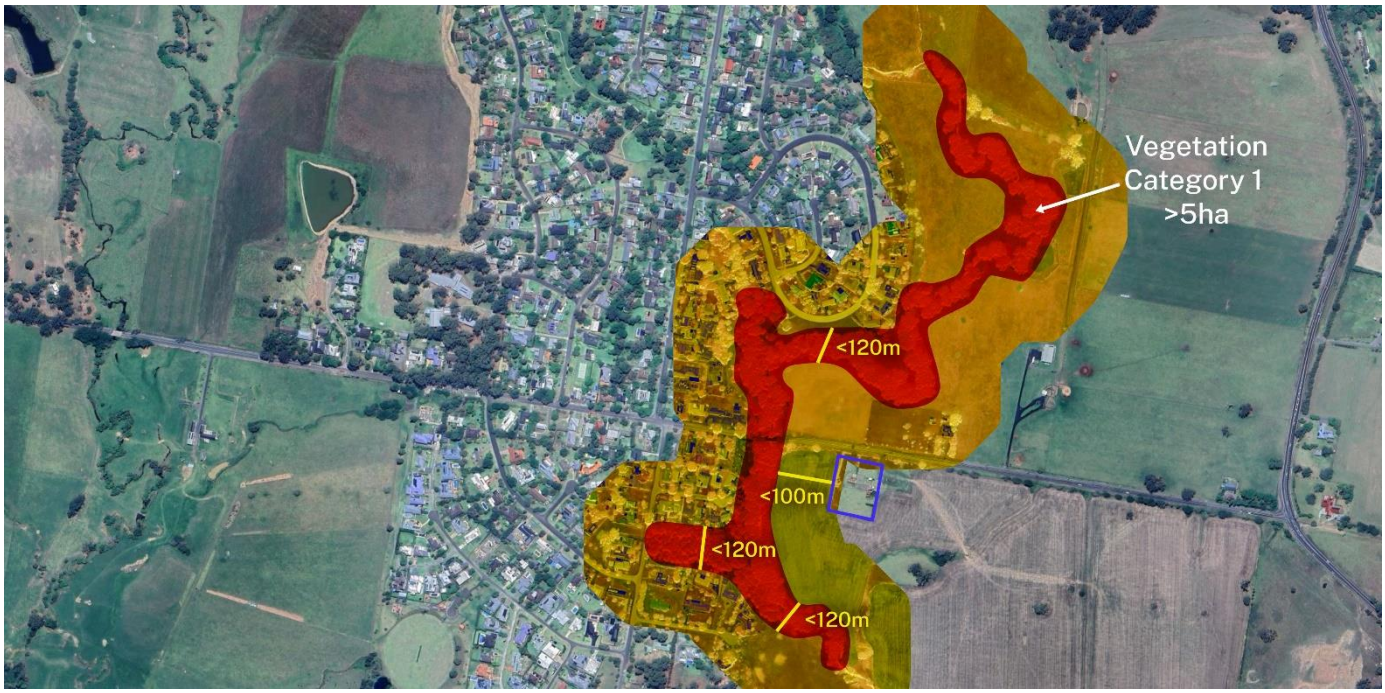


Figure 4: Example 2 of where provision S43C9 of NCC 2022 does not apply.

Note: the blue box indicates the building footprint.

Vehicular access – S43C14 of Specification 43

Addendum 2025 operates to replace the vehicular access requirements within S43C14 with the performance criteria or acceptable solutions in Table 6.8b of PBP 2019. That is, for the DTS solution under G5D4 of the NCC for construction of school buildings, the vehicular access requirements of

Specification 43 are the requirements set out in Table 6.8b of PBP 2019, not Table 3 of Addendum 2022.

When a performance-based solution is required for a Class 9 SFPP building under the NCC

A DTS solution is not achievable for a proposed Class 9 SFPP building on bushfire prone land if the building has a BAL rating of greater than BAL 12.5, or if it cannot for other practical reasons meet the requirements of Specification 43. In these situations, the performance requirements set out in G5P1 and G5P2 of the NCC 2022 must be met before the building can be certified.

Flame temperature considerations for determining if DTS or performance based solution is required under the NCC

G5D2 of NCC 2022 provides the DTS solution can apply to a Class 9 building that is an SFPP located in an area subject to a BAL not exceeding BAL 12.5, determined in accordance with PBP.

PBP does not provide any guidance on how to calculate BAL 12.5 for an SFPP development. For SFPP development, PBP 2019 uses the concept of a 10 kW/m^2 setback based on a calculation using a flame temperature of 1200 K to ensure that radiant heat levels do not exceed critical limits for firefighters and other emergency services personnel undertaking operations. Therefore, to calculate BAL 12.5 as required by G5D2 (NSW), the RFS considers that a flame temperature of 1200 K is appropriate.

Note: A flame temperature of 1200 K must also be used to calculate minimum required asset protection zones (APZ), and radiant heat levels used for internal tenability calculations.

Assistance with quantifying risk relating to vulnerable occupants

For assistance with quantifying the risk associated with bush fire attack relating to vulnerable occupants in Class 9 SFPP buildings the report prepared by EFT Consulting titled 'Risk to Vulnerable Occupants in Class 9 Buildings Associated with Bushfire Attack', 2019 may be used as a guide for performance solutions under G5P1 and G5P2.

How can the RFS assist with Class 9 SFPP buildings?

The RFS can assist developers and consultants with both performance-based assessments for Class 9 buildings that are SFPP under G5P1 and G5P2 of the NCC 2022, and DTS assessments under G5D4 of the NCC 2022, by way of advice on bush fire input requirements to assist in making those assessments.

Case studies have been prepared in **Appendix A** to provide general guidance on bush fire input requirements which may assist with internal tenability assessment under G5P2 and Specification 43.

Additionally, the RFS can provide advice to assist with compliance with G5P1 and G5P2 or Specification 43 at the following stages:

1. Pre-development application (DA) advice, where requested through the RFS Pre-DA process.
2. Confirmation of the bush fire inputs to G5P2 or Specification 43 provided when the DA / planning approval is formally referred to the RFS.
3. Post-DA advice.

The RFS response to stakeholder engagement via the DA / planning phase will be in the form of 'general advice' included within the referral response from the RFS. Where advice to assist with compliance with G5P2 or Specification 43 is sought at this stage, the request for this type of advice should be clearly stated at the front of the report and the inputs to be reviewed should be provided in a separate section of the report.

Advice obtained could include verification of design bushfire modelling, advice on firefighter operational needs (including, but not limited to, water supply and access) and advice on bush fire management and evacuation strategies.

The RFS role in the development assessment process for bush fire planning and design and operational and response matters relating to bush fire emergencies is identified in the Practice Note of May 2024.

Appendix A

Case study 1 (BAL rating < 12.5)

Proposal: To construct a new building with classrooms and science lab (Class 9b building) within an existing school.

Site description: The site is an existing independent school separated from a large patch of mapped Category 1 vegetation by a public road. The entire site is mapped bush fire prone land (**Figure 5**).

Legislative pathway: The proposal is SFPP development on bush fire prone land that requires a Bush Fire Safety Authority (BFSA) as it is "integrated development" under section 4.46 of the EP&A Act. Before consent can be granted to a development application for such development, the consent authority must obtain the general terms of approval (GTA) for any BFSA proposed to be granted by the RFS.

The RFS will assess the proposed development against the requirements of PBP 2019 as part of its consideration of whether to issue GTAs. Section 6.8 of PBP 2019 and Appendix B of Addendum 2022 to PBP 2019 identify BPMs for SFPP development.

NCC requirements: As a Class 9 SFPP building on bushfire prone land, the additional bushfire requirements of part G5 of NCC 2022 must be complied with.

As the BAL at the building does not exceed BAL 12.5 (**Figure 6**) Clause G5D4 of NCC 2022 enables the DTS provisions of Specification 43 (as amended by PBP) (including Addendums) to be used to demonstrate compliance with part G5.

Addendum PBP 2025 requirements: The proposed building is within 100 m of bush fire prone land Category 1 vegetation that is > 5 ha is size and is not a corridor with a width of 120 m or less at its widest point, therefore the internal tenability requirements (S43C9) of Specification 43 still apply to the development.

As the DTS provisions of Specification 43 apply, amendment 2 of Addendum 2025 applies. Amendment 2 provides that the performance criteria or acceptable solutions in Table 6.8b of PBP 2019 must be complied with instead of provision S43C14 (access).

Addendum PBP 2022 requirements: As the proposed development is a SFPP, Tables 2 and 4 of Appendix B must be complied with for construction and water supply.

Note: The requirement to comply with Table 3 (access) of Appendix B has been removed by Addendum PBP 2025 in respect of primary and/or secondary school buildings.

RFS engagement: Internal tenability requirements of NCC 2022 apply and the DTS requirements of Specification 43 can be used to achieve compliance.

The project team, consisting of multiple disciplines such as certifiers, planners, fire engineers, structural engineers and surveyors should engage a qualified Level 3 Bushfire Planning and Design (BPAD) Accredited Practitioner to model the bush fire inputs required to assist with developing a compliant internal tenability solution. The bush fire inputs are necessary to determine the expected external heat at the building based on a design bush fire. The inputs may vary depending on the solution proposed by the project team.

It is not necessary to submit the bush fire inputs to the RFS, however it may help if there are any issues with certification. Alternatively, if a bush fire design brief (BFDB) is proposed, RFS could be engaged early to provide stakeholder input.

To enable the project team to determine if a feasible solution can be developed before proceeding with the application, the RFS can assist in confirming the bush fire inputs through the RFS Pre-Development Application (DA) service. A Pre-DA form providing details of the proposal and the specific bush fire inputs requiring confirmation (**Figure 7**), a map showing the building location,

separation to the hazard, slope assessment and any shielded elevations (as applicable) (**Figure 8**), and modelling showing the AS3959 Method 2 modelling inputs and outputs (**Figure 6**) should be provided to the RFS.

The project team needs to design the development to meet all bush fire requirements of PBP 2019, PBP Addendum 2022, PBP Addendum 2025, and the NCC. A bush fire report should then be prepared and submitted to the consent authority along with the written Pre-DA advice from the RFS (if provided). To approve the development, the consent authority must obtain GTAs for any BFSA proposed to be granted by the RFS.

Outcome: The certifier can choose to rely on RFS' confirmation of the bush fire inputs used for the proposed solution, rather than seeking further information from the project team.

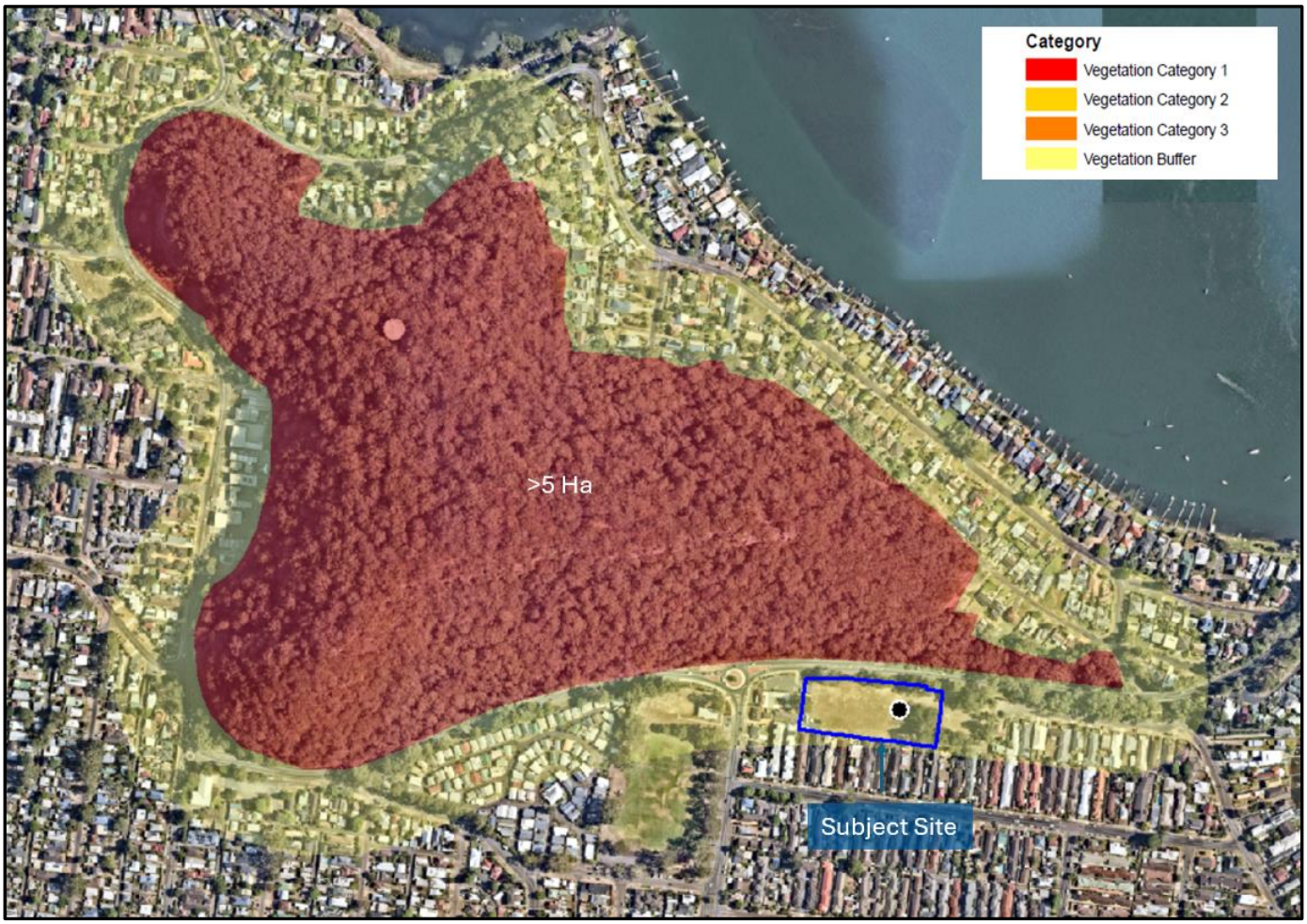


Figure 5: Bush fire prone land map

1. User's Input

Site Address: Example 1

Vegetation: Dry sclerophyll forest

Effective Slope (degree): -10

Separation Distance (m): 67

Flame Angle (degree): 82 (by Algorithm)

Elevation of Radiation Receiver (m): 5.75 (by Algorithm)

Site Slope (degree): 0

2. Program's Settings

Flame Width (m): 100

Flame Temperature (K): 1,200

Flame Emissivity: 0.95

Surface Fuel Load (t/ha): 21.3

Overall Fuel Load (t/ha): 27.3

Vegetation Height (m): N/A

Fire Danger Index: 100

Wind Speed (km/h): N/A

Ambient Temperature (K): 308

Relative Humidity (%): 25

Heat of Combustion (kJ/kg): 18,600

Rate of Fire Spread Calculated by: Forest Mk 5

Flame Length Calculated by: Modified McArthur Forest Mk 5

Modelling Atmosphere Attenuation: Yes

Check Flame Contact: No

3. Output

Rate of Fire Spread (km/h): 1.28

Fire Intensity (kW/m): 18,083

Flame Length (m): 11.61

Transmissivity: 0.759

View Factor: 0.0621

Radiant Heat Flux (kW/m^2): 5.27

BAL: BAL-12.5

AS3959 Construction Section: 3 and 5

Figure 6: Key modelling inputs for consideration of internal tenability

EXAMPLE PRE-DA APPLICATION FORM

Applicant Details			
Name:	John Smith	Company Name:	Burning Solutions Pty Ltd
Postal Address:	124 Main Street, Sydney		
Phone:	(02) 8741 5555	Email:	John@burningsolutions.com.au

Site Details	
Street Address:	124 Sample Street, Sampletown
Lot & DP No.:	Lot 1 DP 12345678

Details of the Development Proposal			
Development type:	☐ Subdivision / Dual Occupancy	☑ SFPP	☐ Residential Infill
Description of proposed development / use:	The development proposal relates to the construction of a new building with classrooms and science lab (Class 9b building) within an existing school.		
Information attached:	**Bush fire Assessment Summary** **Design Bushfire Modelling**		

Issues for Discussion

Summary of particular issues to be discussed / areas of potential non-compliance:

To facilitate an assessment of the internal tenability of the proposed building required under S43C9 of National Construction Code 2022 design bushfire modelling is necessary to establish the peak radiant heat impact.

Design bushfire modelling has been undertaken consistent with Method 2 of Australian Standard 3959 'Construction of buildings in bushfire-prone areas' 2018.

The following table outlines the adopted input data:

Data	Recording	Comment
effective slope	10° up	>20 degrees recorded onsite & verified from 1 m contours. Slope capped at 10 degrees consistent with NSW RFS policy.
site slope	0° across	Recorded onsite & verified from 1 m contours.
elevation of receiver	5.5 m	Measured from plans provided and verified to be below calculated peak elevation of receiver.
vegetation formation and fuel load	Sydney Coastal Dry Sclerophyll Forests 21.3 t/ha / 27.3 t/ha	Recorded on NSW State Type Vegetation Mapping. Fuels loads consistent with NSW RFS publication 'Comprehensive Vegetation Fuel Loads'.

distance from asset to vegetation	67 m	Measured from Site Plan and verified by aerial imagery.
regional climatic data (FFDI)	100	Sourced from NSW Rural Fire Service publication 'NSW Local Government Areas FDI' (2017).
flame temperature	1200K	Consistent with Special Fire Protection Purpose development.

The resultant modelling calculated the maximum radiant heat flux is **5.27 kW/m²**.

In accordance with A1.8 of PBP 2019 the following aspects are shielded from this transect:

Figure 1: Shielded elevation (Blue line)

Please refer to the attached report for complete results.

Comment on the attached design bushfire modelling is sought to demonstrate stakeholder engagement.

Declarations	
Are you or any party involved in this pre-DA application: 1. A member of or engaged by the NSW RFS? 2. An employee or engaged by the relevant consenting authority?	☐ Yes ☑ No
I understand that the advice given will be based on the information provided and will not prejudice the outcome of any subsequent determination.	
Signature:	Date: 12.12.2024

Figure 7: Pre-DA Form

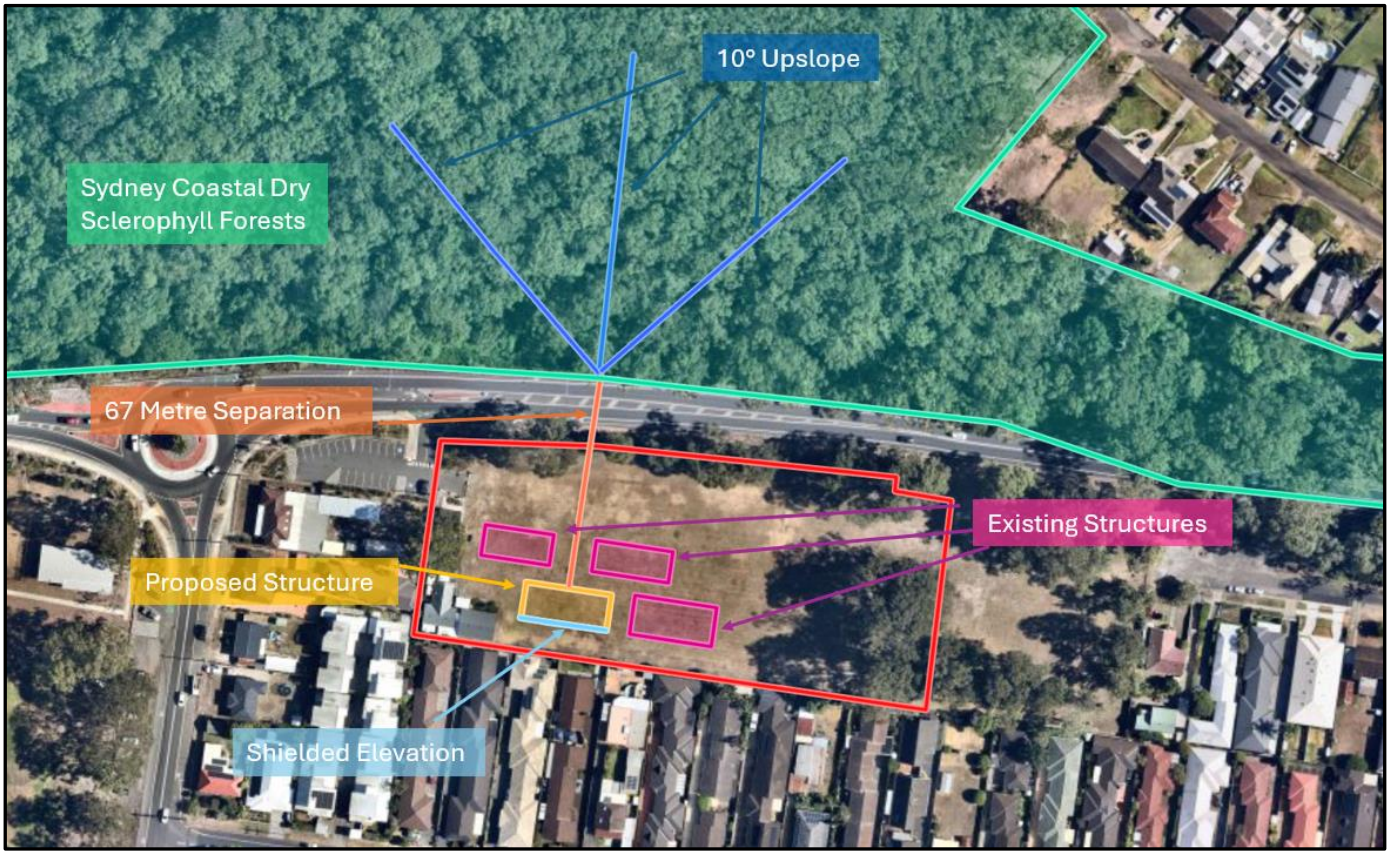


Figure 8: Map showing bush fire assessment summary

Case study 2 (BAL rating > 12.5)

Proposal: Demolition of an existing NSW Department of Education primary school classroom complex and construction of a new school library and performing arts space.

Site description: The site is an existing school separated from a 3.5 ha patch of mapped Category 1 vegetation by a public road. The location of the new building is mapped bush fire prone land (**Figure 9**).

Legislative pathway: Division 5.1 of the EP&A Act allows NSW School Infrastructure to self-assess the environmental impacts of new school and major school upgrade projects; these activities do not require development consent under Part 4 of the EP&A Act. However, under section 100B of the RF Act, as the proposed development is a SFPP development on bush fire prone land, it does require a BFSA. The Commissioner of the NSW RFS is a determining authority for the purposes of development without consent.

The RFS will assess the proposed development against the requirements of PBP 2019 as part of its consideration of whether to issue a BFSA. Section 6.8 of PBP 2019 and Appendix B of Addendum 2022 identify BPMs for SFPP development.

NCC requirements: As a Class 9 building on bush fire prone land, the additional bushfire requirements of part G5 of NCC 2022 must be complied with.

As the BAL at the building exceeds BAL 12.5 (**Figure 10**), the DTS provisions of G5D4 cannot be used to demonstrate compliance with part G5. Instead, clauses G5P1 and G5P2 of NCC 2022 contain the performance requirements required to be met.

Addendum PBP 2025 requirements: As the BAL at the building exceeds BAL 12.5, the performance requirements in G5P1 and G5P2 of NCC 2022 must be met, rather than the DTS solution at G5D4. Amendment 1 and 2 of Addendum 2025 do not apply. However, Addendum 2025 amends Addendum 2022 to exclude primary and/or secondary school buildings from complying with Table 3 of Addendum 2022. This means Table 6.8b of PBP 2019 must be complied with for access, as well as NCC performance requirements.

Addendum PBP 2022 requirements: As the proposed development is a SFPP, Tables 2 and 4 of Appendix B must be complied with for construction and water supply.

Note: The requirement to comply with Table 3 of Appendix B has been removed by Addendum PBP 2025 in respect of primary and/or secondary school buildings.

RFS engagement:

The suitability of the building location was the subject of consultation with the RFS at the Pre-DA stage. The building location in an area exceeding 10 kW/m^2 was ultimately considered acceptable due to consideration of site constraints and increased BPMs.

The project team, consisting of multiple disciplines such as certifiers, planners, fire engineers, structural engineers, surveyors etc. should engage a qualified Level 3 BPAD Accredited Practitioner to model the bush fire inputs required to assist with developing a compliant internal tenability performance solution. The bush fire inputs are necessary to determine the expected external heat at the building based on a design bushfire. The inputs may vary depending on the solution proposed by the project team.

It is not necessary to submit the bush fire inputs to the RFS, however it may help if there are any issues with certification. Alternatively, if a BFDB is proposed, RFS could be engaged early to provide stakeholder input.

Once the project team have designed the development to meet all relevant bush fire requirements, including those of PBP 2019 and PBP Addendum 2022 and the NCC, a bush fire report must be prepared and submitted to the RFS by NSW Schools Infrastructure to obtain a BFSA from the RFS.

At the certification stage, if the certifier questions any of the bush fire inputs and in this case, the lack of perimeter access around the development, the project team may send the bush fire inputs and summary of the access issue (**Figure 11**), a map showing the building location, separation to the hazard, slope assessment, short fire run, and any shielded elevations (as applicable) (**Figure 12**), and modelling showing the short fire run modelling inputs and outputs (**Figure 10**) to the RFS Post-DA service.

If satisfied, the RFS can confirm in a written post-DA response that the internal tenability bush fire inputs are accurate and provide commentary on being satisfied with the proposed access to the building.

Outcome:

The certifier can choose to rely on RFS' confirmation of the bush fire inputs used for the proposed solution, rather than seeking further information from the project team.

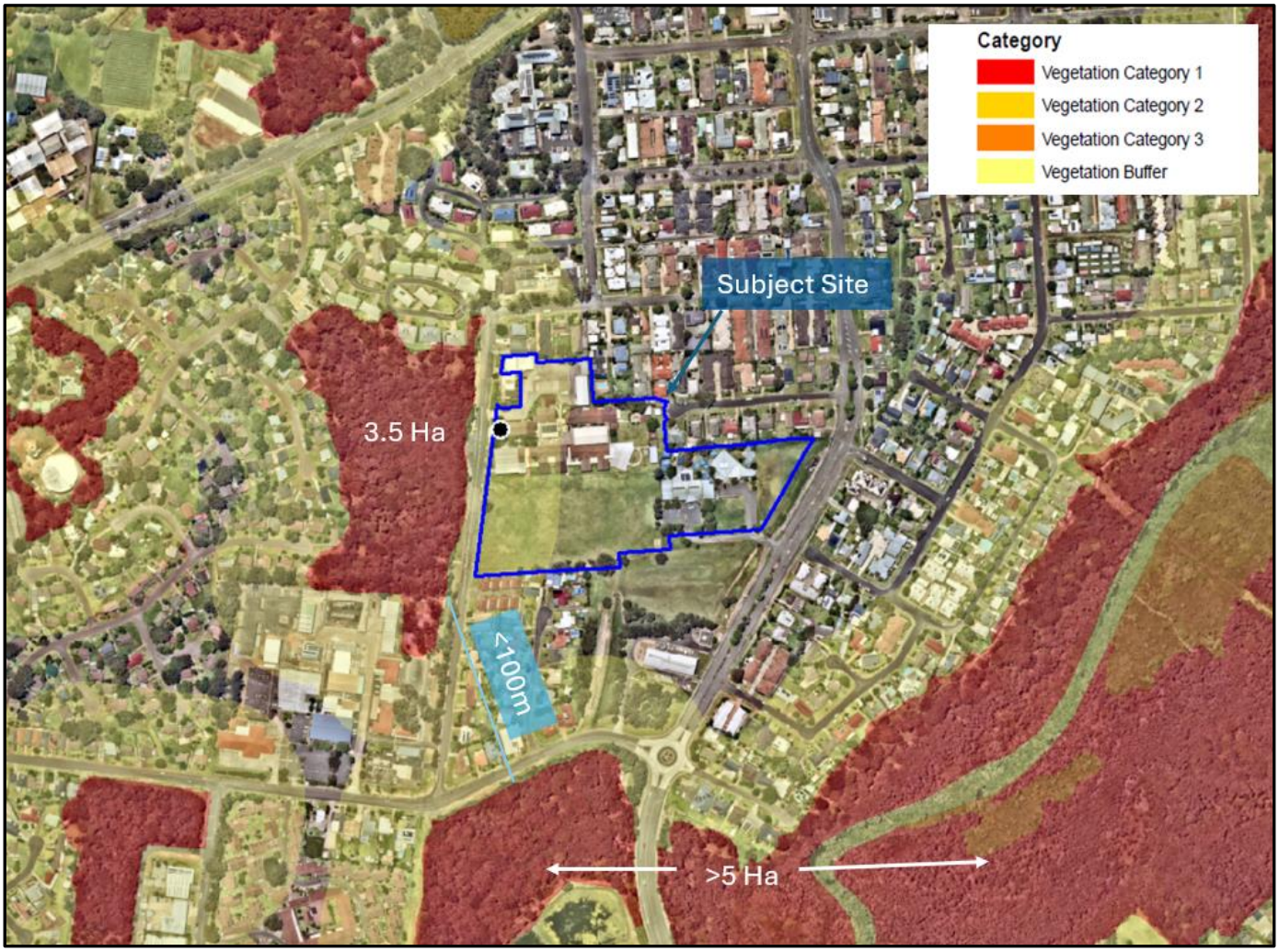
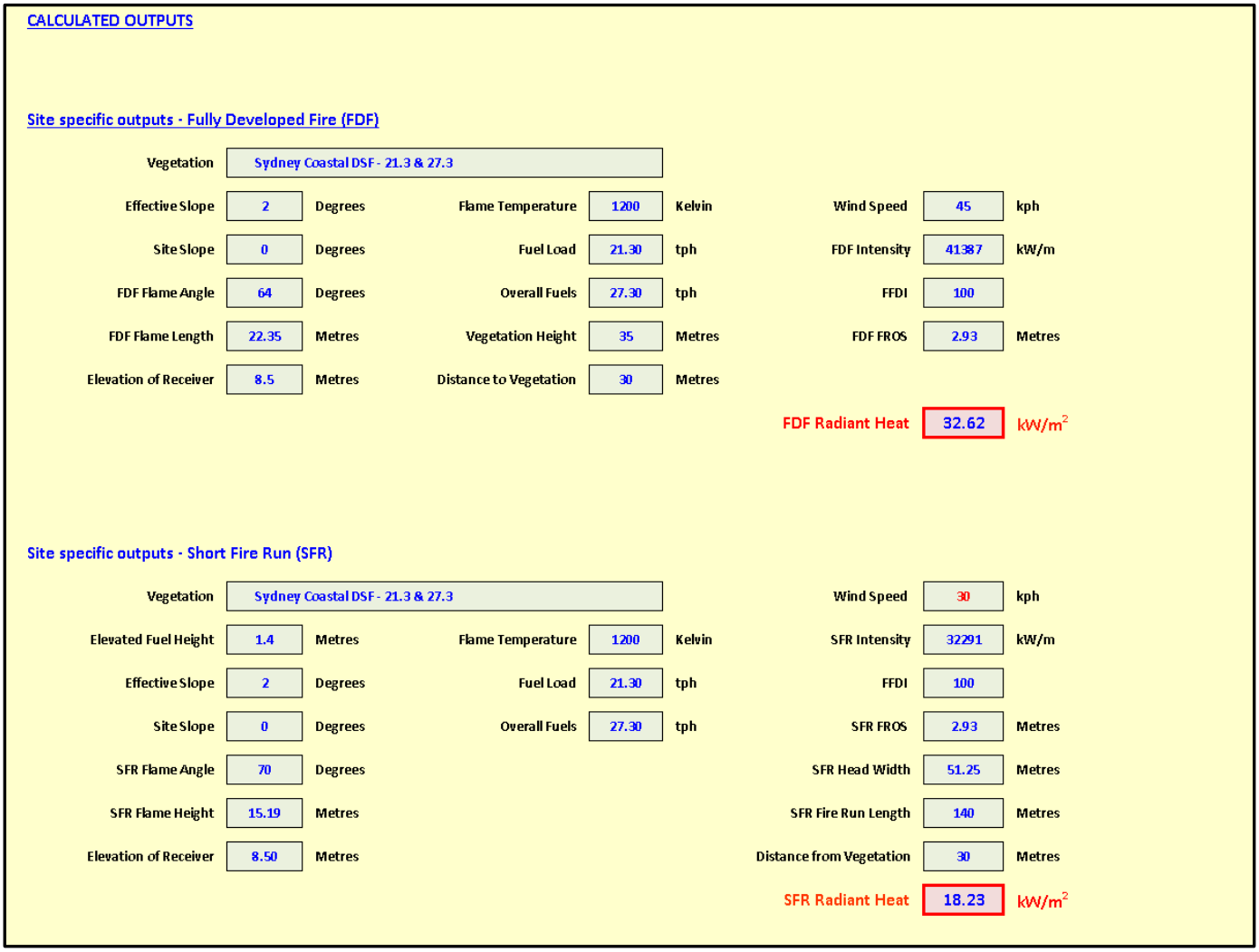


Figure 9: Bush fire prone land map



CALCULATED OUTPUTS

Site specific outputs - Fully Developed Fire (FDF)

Vegetation	Sydney Coastal DSF - 21.3 & 27.3							
Effective Slope	2	Degrees	Flame Temperature	1200	Kelvin	Wind Speed	45	kph
Site Slope	0	Degrees	Fuel Load	21.30	tph	FDF Intensity	41387	kW/m
FDF Flame Angle	64	Degrees	Overall Fuels	27.30	tph	FFDI	100	
FDF Flame Length	22.35	Metres	Vegetation Height	35	Metres	FDF FROS	2.93	Metres
Elevation of Receiver	8.5	Metres	Distance to Vegetation	30	Metres			
						FDF Radiant Heat	32.62	kW/m^2

Site specific outputs - Short Fire Run (SFR)

Vegetation	Sydney Coastal DSF - 21.3 & 27.3					Wind Speed	30	kph
Elevated Fuel Height	1.4	Metres	Flame Temperature	1200	Kelvin	SFR Intensity	32291	kW/m
Effective Slope	2	Degrees	Fuel Load	21.30	tph	FFDI	100	
Site Slope	0	Degrees	Overall Fuels	27.30	tph	SFR FROS	2.93	Metres
SFR Flame Angle	70	Degrees				SFR Head Width	51.25	Metres
SFR Flame Height	15.19	Metres				SFR Fire Run Length	140	Metres
Elevation of Receiver	8.50	Metres				Distance from Vegetation	30	Metres
						SFR Radiant Heat	18.23	kW/m^2

Figure 10: Key modelling inputs for consideration of internal tenability

POST-DA APPLICATION FORM

Applicant Details			
Name:	John Doe	Company Name:	Firebrand Solutions Pty Ltd
Postal Address:	125 Main Street, Sydney		
Phone:	(02) 8741 2222	Email:	John@ Firebrandsolutions.com.au

Site Details	
Street Address:	125 Sample Street, Sampletown
Lot & DP No.:	Lot 2 DP 12345678

Details of the Development Proposal		
Development type:	☑ SFPP	☐ Other
Description of proposed development / use:	Demolition of an existing primary school classroom complex and construction of a new school library and performing arts space.	
Information attached:	**Bush fire Assessment Summary** **Design Bushfire Modelling**	

Issues for Discussion

Summary of particular issues to be discussed / areas of potential non-compliance:

<u>Internal Tenability</u>

To facilitate an assessment of the internal tenability of the proposed building required under G5P2 (a) of National Construction Code 2022 design bushfire modelling is necessary to establish the peak radiant heat impact.

Design bushfire modelling has been undertaken consistent with the RFS Short Fire Run Methodology (May 2019). The justification for using this methodology is contained in the attached report and was supported by the RFS at the Pre-DA stage (see attached RFS response).

The following table outlines the adopted input data:

Data	Recording	Comment
SFR length	140 m	The longest fire run within the hazard towards the development was 140 m.
effective slope	2° Downslope	Recorded onsite & verified from 1 m contours. The steepest effective slope was used.
site slope	0° across	Recorded onsite & verified from 1 m contours.

elevation of receiver	8.5 m	Measured from plans provided and verified to be below calculated peak elevation of receiver.
vegetation formation and fuel load	Sydney Coastal Dry Sclerophyll Forests 21.3 t/ha / 27.3 t/ha	Recorded on NSW State Type Vegetation Mapping. Fuels loads consistent with NSW RFS publication 'Comprehensive Vegetation Fuel Loads'.
distance from asset to vegetation	30 m	Measured from Site Plan and verified by aerial imagery.
regional climatic data (FFDI)	100	Sourced from NSW Rural Fire Service publication 'NSW Local Government Areas FDI' (2017).
flame temperature	1200K	Consistent with Special Fire Protection Purpose development.

The resultant modelling calculated the maximum radiant heat flux to be **18.23 kW/m^2.**

In accordance with A1.8 of PBP 2019 the following aspects are shielded from this transect:

Figure 1: Shielded elevation (Light blue line)

Please refer to the attached report for complete results.

Comment on the attached design bushfire modelling is sought to demonstrate stakeholder engagement.

Access

As detailed in the attached report, a performance solution is proposed to satisfy the access requirements of G5P2 (b), (c), and (d) of National Construction Code 2022. The solution has had to change slightly from the solution presented to the RFS at the

	planning stage. The access solution considers the proximity of the building to the public road and fire fighting operational needs. Comment on the new access solution is sought to demonstrate stakeholder engagement.

Declarations			
Are you or any party involved in this pre-DA application: 1. A member of or engaged by the NSW RFS? 2. An employee or engaged by the relevant consenting authority?		☐ Yes ☑ No	
I understand that the advice given will be based on the information provided and will not prejudice the outcome of any subsequent determination.			
Signature:		Date:	12.12.2024

Figure 11: Post-DA form

Figure 12: Map showing bush fire assessment summary