



Your Ref: A006989681

Our Ref: 1433

22 July 2026

Dr Kerrie Freeman
Chief Executive Officer
Brisbane City Council

Dear Dr Freeman,

RE: INFORMATION REQUEST RESPONSE - A006989681 - 880 CREEK ROAD, CARINA HEIGHTS

I refer to Council's information request associated with a change application at 880 Creek Road, Carina Heights (Lot 4 on SP259432), and in particular, matters related to bushfire hazard.

Council's information request indicates that the proposed use is to achieve a BAL 12.5 or lower under the Bushfire overlay code (v35, 2025). The information request indicates that an updated site-specific bushfire hazard assessment is required; however, the application (A006989681) is a change application and, as such, this response relates only to the extent of the change. The change application is for the addition of a sales office and amendment of the development staging for previously approved buildings. As such, our response below considers the bushfire hazard only as it relates to the proposed sales office that is the subject of the change.

A site-specific Bushfire Hazard Assessment and Management Plan (9 February 2018, v2.1) (BHAMP) was previously prepared by Litoria Consulting and submitted as part of the development application (BCC Ref.: A004717933). The BHAMP included assessment of hazardous vegetation, fuel loads and fire behaviour. Please note that, although a change is

application has been lodged, the site layout and building design remain consistent with what was assessed as part of the original BHAMP.

Although *City Plan 2014* identifies areas of the site are subject to bushfire hazard on the Bushfire overlay, the site is not within the Bushfire prone areas mapped under the State Planning Policy State-wide map of bushfire prone areas. As outlined in the BHAMP, modelled bushfire prone areas differed from the extent and classification of bushfire prone areas indicated by the SPP State-wide map of bushfire prone areas. The difference could be attributed to the precision of the distribution of vegetation hazard classes observed via site inspection and subsequently adopted in the modelling. Similarly, the modelled bushfire prone areas also differed substantially from the extent indicated by the *City Plan 2014* Bushfire overlay. The latter difference could be attributed to:

- Methodological differences in the prediction of hazard areas, with the Bushfire Overlay Map based on a qualitative assessment using categorical estimates of bushfire hazard, and,
- Vegetation inputs based on pre-2014 vegetation cover, including the recent revegetation of land to the west of the site.

The extent and configuration of hazardous vegetation within the landscape have not changed since the original assessment, and as such, the model input mapping and bushfire modelling has not changed. The results of the modelling effectively replace the SPP State-wide map of bushfire prone areas and *City Plan 2014* Bushfire overlay for assessment purposes. The results of the site-specific assessment indicated that parts of the site were located in the Potential Impact Buffer.

The results of the previous bushfire hazard assessment have been overlaid with the proposed plans that are the subject of the change application (i.e., the proposed sales office). The existing shed that will be utilised for the sales office is located outside of the Potential Impact Buffer (Figure 1). The bushfire hazard affecting the proposed sales office is therefore *low* i.e. it is not located within a bushfire prone area.

An assessment of the proposal against the relevant version of the Bushfire overlay code (v35, 2025) has been undertaken and is attached as part of this information request response. The proposed change complies with the outcomes sought by the overlay code. The proposed development complies with PO1 of the code. As the bushfire hazard affecting the proposed sales office is *low*, in accordance with the note to AO1.1, no further

assessment against the code, Bushfire Attack Level calculation or bushfire management plan is required.

If there are any matters that you wish to discuss, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'D. Clowes', written in a cursive style.

Daniel Clowes BAppSc (EnvSc) DipArb MEIANZ MESA MISA
Director

Encl.: Bushfire overlay code response

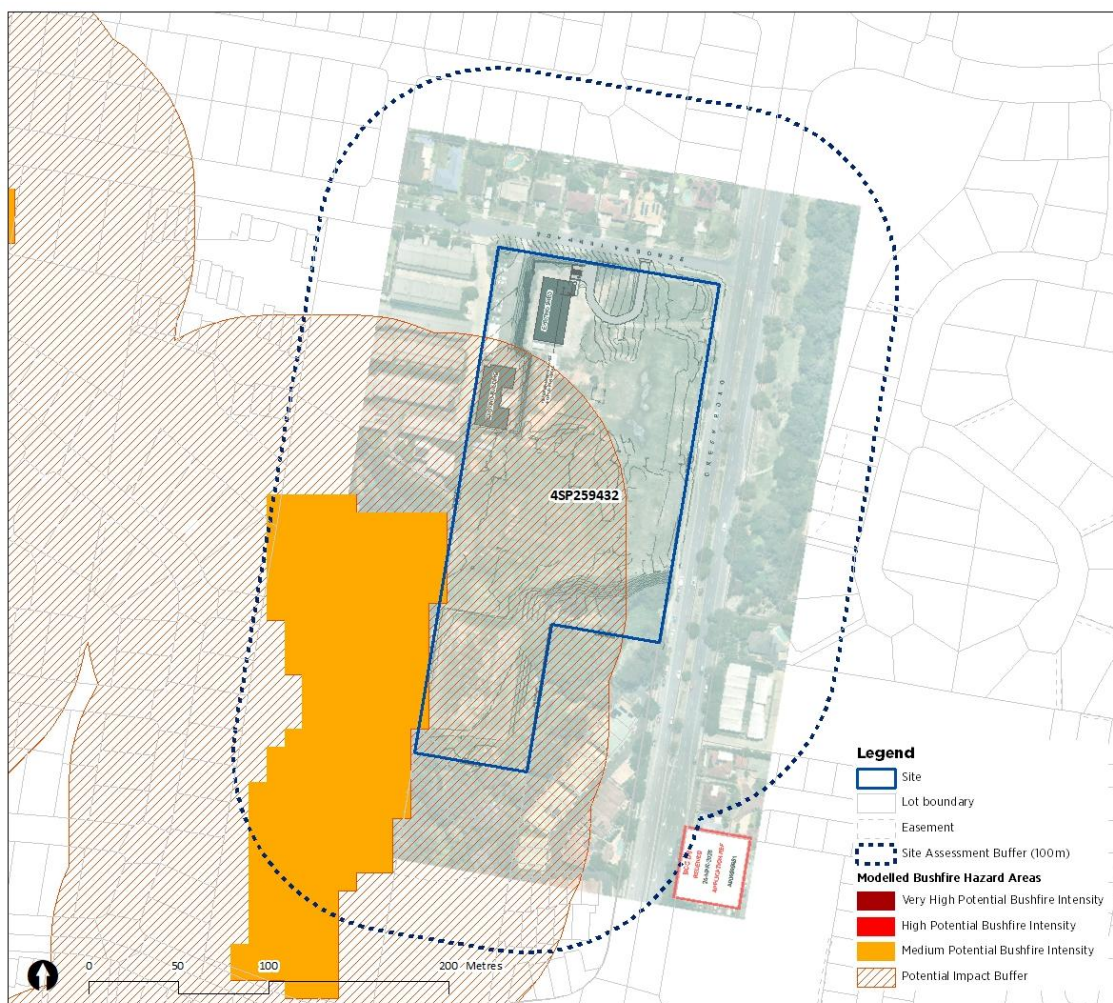


FIGURE 1: PROPOSED CHANGE AND MODELLED BUSHFIRE PRONE AREAS (DEICKE RICHARDS, SITE PLAN PROPOSED, DRAWING NO. DA-011, REV. P1, 23/02/2026).

8.2.5 Bushfire overlay code

8.2.5.1 Application

1. This code applies to assessing development in the Bushfire overlay, if:
 - a. accepted development subject to compliance with identified requirements, where acceptable outcomes of this code are identified requirements in a table of assessment for an overlay (section 5.10); or
 - b. impact assessable development.

Note—This code may also be used in assessing other at-risk impact assessable uses within the Bushfire overlay, including uses which involve significant numbers of persons regularly congregating on the site, or any use that may be difficult to evacuate or vulnerable during or after a bushfire due to the characteristics of the population including age, health, mobility impairment, or requiring supervision or support.

2. Land in the Bushfire overlay is identified on the Bushfire overlay map and is included in the following sub-categories:
 - a. High hazard area sub-category;
 - b. Medium hazard area sub-category;
 - c. High hazard buffer area sub-category;
 - d. Medium hazard buffer area sub-category;
 - e. Potential impact sub-category;
 - f. Very high potential bushfire intensity sub-category;
 - g. High potential bushfire intensity sub-category;
 - h. Medium potential bushfire intensity sub-category;
 - i. Potential impact buffer sub-category.

Note—For the purposes of section 7 of the *Building Regulation 2021*, the land identified within the Bushfire overlay on the Bushfire overlay map are 'designated bushfire prone areas'.

Note—For 8.2.5.1(2)(e) to (i) is applicable only to the Ferny Grove—Upper Kedron neighbourhood plan (Cedar Creek south precinct/NPP-001). Refer to the State Planning Policy: Natural hazards and resilience for definition.

Editor's note—Sub-categories cited in 8.2.5.1(2)(e) to (i) only apply in Cedar Creek south precinct (Ferny Grove—Upper Kedron neighbourhood plan/NPP—001) in accordance with the Minister's conditions dated 28 May 2018.

3. When using this code, reference should be made to section 1.5 and section 5.3.3.

Note—The following purpose, overall outcomes, performance outcomes and acceptable outcomes comprise the assessment benchmarks of this code.

Note—Where this code includes performance outcomes or acceptable outcomes that relate to:

- a bushfire management plan and a site-specific or precinct-wide bushfire hazard assessment, guidance is provided in the Bushfire planning scheme policy;
- a bushfire management plan pertaining to hazardous chemicals, guidance is provided in the Bushfire planning scheme policy and the Industrial hazard and risk assessment planning scheme policy.

Editor's note—For a proposal to be accepted development subject to compliance with identified requirements, it must meet all the identified accepted outcomes of this code that relate to the applicable sub-category and any other applicable code. Where it does not meet all identified acceptable outcomes, the proposal becomes assessable development and a development application is required. Where a development application is triggered, only the specific acceptable outcomes that the proposal fails to meet needs to be assessed against the corresponding assessable acceptable outcomes or performance outcomes and relevant overall outcomes. Other identified acceptable outcomes that are met are not assessed as part of the development application.

8.2.5.2 Purpose

1. The purpose of the Bushfire overlay code is to:
 - a. Implement the policy direction in the Strategic framework, in particular:
 - i. Theme 2: Brisbane's outstanding lifestyle, and Element 2.3 — Brisbane's healthy and safe communities;
 - ii. Theme 4: Brisbane's highly effective transport and infrastructure networks, and Element 4.3 — Brisbane's coordinated infrastructure planning and delivery.
 - b. Provide for the assessment of the suitability of development in the Bushfire overlay.
2. The purpose of this code will be achieved through the following overall outcomes.
 - a. Development maintains the safety of people and property by not exposing them to an unacceptable risk from bushfire.
 - b. Development does not increase the exposure of people and property to an unacceptable risk.
 - c. Development involving new premises for vulnerable uses, difficult to evacuate uses and assembly uses is not located in an area of unacceptable risk.
 - d. Development which would increase the number of people living, working on or visiting the site is not exposed to an unacceptable risk from bushfire.
 - e. Development incorporates appropriate siting, design and management measures to avoid areas at risk of bushfire and mitigate risk from bushfire.
 - f. Development for essential community infrastructure and its function during a bushfire event is protected from unacceptable risk.
 - g. Development involving the storage and handling of hazardous chemicals in the Bushfire overlay does not pose an unacceptable risk to public safety or the environment.
 - h. Development provides access and evacuation routes for both private and emergency service vehicles which are appropriate to the nature of the development and the level of bushfire risk.
 - i. Development provides for fire-fighting requirements.
 - j. Development mitigates bushfire risk to people and property using measures that avoid or minimise impacts on biodiversity values, ecological features and ecological processes.
 - k. Development addresses and takes appropriate account of the potential impact of all future bushfire hazard.

8.2.5.3 Performance outcomes and acceptable outcomes

Table 8.2.5.3.A—Performance outcomes and acceptable outcomes

Performance outcomes	Acceptable outcomes	Comments
Section A—If for accepted development subject to compliance with identified requirements (acceptable outcomes only) or assessable development		
PO1	AO1.1	Complies. A site-specific Bushfire Hazard Assessment and Management Plan (9 February 2018, v2.1)

Development: a. minimises the bushfire hazard; b. maximises the protection of life and property from bushfire; c. addresses the bushfire hazard determined by a bushfire hazard assessment; d. where not in compliance with an approved bushfire management plan or development footprint: i. achieves a bushfire attack level that is less than or equal to BAL-29; or ii. achieves a bushfire attack level that is less than or equal to BAL-12.5 if for vulnerable uses, difficult to evacuate uses, assembly uses, essential community infrastructure or involving the handling or storage of hazardous chemicals exceeding amount specified in Table 8.2.5.3.D; or iii. if on a site of an existing premises and not a vulnerable use, difficult to evacuate use, assembly use, essential community infrastructure or involving the handling or storage of hazardous chemicals exceeding amounts specified in Table 8.2.5.3.D: A. does not extend beyond the bounds of the existing development footprint; B. does not increase the GFA by 10% or 100m², whichever is the greater; C. does not involve a new use on the site;	Development is designed and sited in compliance with: a. an approved bushfire management plan relevant to the full nature of the uses, which identifies the level of bushfire hazard and the location of hazardous vegetation affecting the development; or b. an approved development footprint identifying the development footprint plan and bushfire management footprint plan; or c. a bushfire hazard assessment and bushfire management plan prepared in accordance with the Bushfire planning scheme policy which: i. is undertaken by a suitably qualified person with technical expertise in the field of bushfire hazard identification and mitigation; ii. determines the relevant bushfire attack level for that part of the site in which development is proposed; iii. identifies the location of hazardous vegetation that poses a bushfire risk to the development. Note—Where a bushfire hazard assessment determines that the bushfire hazard for the part of the site in which development is proposed is 'low', no further assessment against this code is required. Note—A 'low' bushfire attack level must not be assumed for development in the Potential impact sub-category and in any areas subject to revegetation or regrowth vegetation even where the area is non-vegetated or vegetation is considered low threat in accordance with AS 3959 Construction of buildings in bushfire-prone areas. The Bushfire planning scheme policy provides advice about the sources of information to be consulted to determine areas subject to revegetation or regrowth vegetation and the hazard classification of that vegetation in its mature state. Note—A bushfire management plan is to be prepared having regard to any bushfire hazard assessment undertaken to prepare a neighbourhood plan. Note—Any bushfire management zone, asset protection zone or similarly defined area approved as part of a bushfire management	(BHAMP) was previously prepared by Litoria Consulting and submitted as part of the development application (BCC Ref.: A004717933). The BHAMP included assessment of hazardous vegetation, fuel loads and fire behaviour. The results of the assessment indicated that parts of the site were located in the Potential Impact Buffer. The results of the assessment have been overlaid with the proposed plans that are the subject of the change application. The existing shed that will be utilised for the sales office is located outside of the Potential Impact Buffer. The bushfire hazard affecting the proposed sales office is therefore <i>Low</i>. In accordance with the note to AO1.1, no further assessment against this code, Bushfire Attack Level calculation or bushfire management plan is required.
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D. is supported by a bushfire risk assessment prepared by a suitably qualified person with technical expertise in the field of bushfire hazard identification and mitigation, which demonstrates that the bushfire risk is acceptable. Note—Bushfire hazard is generally assessed based on the vegetation existing on site, adjacent and nearby to the site at the time of application. However, the level of bushfire hazard posed by any areas subject to revegetation or regrowth vegetation is assessed as if that area had reached its mature state. The Bushfire planning scheme policy provides advice about the sources of information to be consulted to determine areas subject to revegetation or regrowth vegetation and the hazard classification of that vegetation in its mature state. Note—Where a bushfire risk assessment is required it must be carried out in accordance with the State Planning Policy and the National Emergency Risk Assessment Guidelines prepared by the Australian Institute of Disaster Resilience.	plan used for bushfire management purposes is considered to be a bushfire management footprint plan. A building protection zone can compromise both the development footprint plan and the bushfire management footprint plan. AO1.2 Development where not in compliance with an approved bushfire management plan or development footprint identifying the development footprint plan and bushfire management footprint plan: - achieves a bushfire attack level that is less than or equal to: - BAL-29; or - BAL-12.5 if for vulnerable uses, difficult to evacuate uses, assembly uses, essential community infrastructure or involving the handling or storage of hazardous chemicals exceeding the amount specified in Table 8.2.5.3.D. Note—Bushfire attack level (BAL) is the radiant heat flux that will be experienced during a bushfire and is a measure of heat energy impact expressed as kW/m². BAL is measured within the area of the nominated development footprint plan and excludes the area of any bushfire management footprint plan.	
If for development other than reconfiguring a lot		
PO2 Development other than an extension to an existing building is sited, designed and maintained taking account of all relevant factors affecting the bushfire hazard on the site, including site topography, aspect, location and type and structure of vegetation to: - minimise the number of buildings and people working, living or visiting a site exposed to bushfire risk; - protect life during bushfire;	AO2.1 Development is: - sited in compliance with an approved development footprint identifying the development footprint plan and bushfire management footprint plan or bushfire management plan relevant to the full nature of the use; or - if there is no approved development footprint identifying the development footprint plan and bushfire management footprint plan or bushfire	

c. increase the survival of buildings and structures during a bushfire; d. minimise bushfire risk from build-up of fuels around buildings and structures. Note—A bushfire management plan prepared in accordance with the Bushfire planning scheme policy can assist in demonstrating achievement of this performance outcome.	management plan, where on a lot greater than 10 hectares, located in the area of lowest risk from bushfire on the site; and c. if there is no approved development footprint identifying the development footprint plan and bushfire management footprint plan or bushfire management plan, where on a lot greater than 2,500m²: i. located away from ridgelines in compliance with Figure a; ii. located on land with a gradient less than 15%; iii. preferably located on east- to south-facing slopes and avoiding north- to west-facing slopes unless the slope is clear of vegetation and is not located in the High hazard buffer area sub-category or the Medium hazard buffer area sub-category. AO2.2 Development is sited within a building protection zone extending a minimum of 20m from the outermost projection of the main building or any habitable structure or to the maximum extent possible on sites less than 2500m² where a building protection zone would extend into neighbouring properties; and a. clusters buildings and structures in the building protection zone; b. designs the inner 10m of the building protection zone to maintain a very low fuel state in the first 10m, and a fuel-reduced state to the extent of the building protection zone, in compliance with Figure b and Figure c.	
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	Note—The building protection zone includes the dwelling and all ancillary structures and may extend to a road or a building protection zone in an adjoining site.	
PO3 Development utilises fencing that: a. does not contribute to the spread of bushfire; b. in an urban area or in proximity to accommodation uses, contributes to reducing bushfire hazard to a building; c. facilitates the safe movement of fauna.	A03.1 Development for a fence within 20m of any building used for accommodation comprises non-combustible or fire retardant materials. A03.2 Development for a fence: a. incorporates gaps and spacing to allow the safe movement of fauna; or b. is designed to enable fauna to climb the fence.	
PO4 Development ensures that the location, siting, and design of development and associated driveways and access routes: a. avoid potential for entrapment during a bushfire; b. facilitate safe and efficient emergency services to access and egress the site during a bushfire; c. enables safe evacuation of the site during a bushfire for site occupants. Note—A bushfire management plan prepared in accordance with the Bushfire planning scheme policy can assist in demonstrating compliance with this performance outcome.	A04 Development ensures that: a. the length of driveways or access routes does not exceed 70m between the most distant part of any occupied building and the nearest part of the public road; or b. where the length of the driveway or access route exceeds 70m: i. the driveway or private access route design meets the requirements of emergency vehicles in compliance with Table 8.2.5.3.C; ii. the driveway or access route provides all weather access for two-wheel-drive vehicles; iii. where relying on a private access route or driveway longer than 200m to reach a public road, a safe alternative access and egress route is provided.	
PO5	A05	

Development has adequate road access to the site for emergency vehicles and safe evacuation in a bushfire.	Development has frontage to a constructed, all-weather public road capable of carrying emergency service vehicles.	
PO6 Development makes adequate provision for fire-fighting requirements, including water supply.	A06 Development ensures that: a. a reliable reticulated water supply and water pressure is available for fire-fighting requirements with water supply and pressure, which is in compliance with the standards specified by the relevant utilities provider; or b. where sufficient reticulated water supply is not available for: i. residential lots, there is a minimum water supply available and retained for fire-fighting purposes in compliance with Table 8.2.5.3.B, which may be in the form of a separate tank or a reserve section as part of a main water supply tank; or ii. development other than for residential lots involving new premises or an existing premises with a gross floor area greater than 50m², on-site water storage is provided which is appropriate to the use, according to the standards specified by the relevant emergency services agency and is not less than 5,000 litres. Note—Water supply for fire fighting is in addition to water supply for household use. Where a non-reticulated supply of water is required, swimming pools, creeks and dams should not be used as a substitute for a dedicated static supply as these sources of water are not reliable during drought conditions.	
PO7	A07	

Development ensures that the water supply provided for fire-fighting is safely located and freely accessible for fire-fighting purposes at all times.	Development, for which sufficient reticulated water supply is not available, provides: - a water supply outlet located away from any potential fire hazards, such as gas bottles; - a hardstand area of 11m by 3.5m for fire-fighting vehicles within 2m of the water supply outlet; - tanks on the bushfire hazard side of the buildings with adequate shielding for the protection of fire fighters; - pumps which are shielded from bushfire hazard; - an outlet pipe which is 50mm in diameter and fitted with a 50mm male camlock (standard rural fire brigade fitting); - that any underground tank for fire-fighting purposes has an access hole of 200mm to allow a tanker to refill direct from the tank; - that any above-ground water tank is made of concrete or metal and its stand is protected from bushfire hazard; - that all above-ground water pipes external to the building are metal, including and up to any taps. Note—Plastic tanks are not to be used.	
Additional performance outcomes and acceptable outcomes for all development in the Biodiversity areas overlay if on a site larger than 2,500m²		
PO8 Development through the siting, design, and construction of buildings, access routes and fire maintenance trails, and ongoing site management: - provides effective separation from sources of bushfire risk; - responds to the bushfire risk in that location;	A08 Development locates building protection zones as shown on Figure b and Figure c, driveways and access routes and any fire maintenance trails: - outside of the Biodiversity areas overlay; or - within the existing disturbed, degraded or cleared areas, using natural fire breaks to avoid vegetation clearing and to avoid or otherwise	

c. maintains the safety and protection of people and property over time; d. maximises the protection of vegetation in areas of high biodiversity value. Note—A bushfire management plan prepared in accordance with the Bushfire planning scheme policy can assist in demonstrating compliance with this performance outcome that ensures: • ongoing site management, such as the bushfire risk to buildings, does not increase beyond the standard to which they have been designed and constructed; • appropriate design and maintenance of the site, and access routes and driveways.	minimise fragmentation or incursions into a habitat area, fauna movement corridor or remnant vegetation.	
Section B—If for assessable development other than ROL		
PO9 Development: a. provides for safe and efficient evacuation and emergency services access to the site during a bushfire; b. does not concentrate large numbers of people or locate significant worker or resident populations in an area of bushfire hazard; c. avoids locating the following uses in an area of bushfire hazard: i. vulnerable uses; ii. difficult to evacuate uses; iii. assembly uses. Note—This includes consideration of appropriate alternative shelter for vulnerable uses, management of health and wellbeing requirements during evacuation, safe site operation, and access and egress arrangements in bushfire events. Note—A bushfire management plan prepared in accordance with the Bushfire planning scheme policy can assist in demonstrating compliance with this performance outcome.	AO9.1 Development: a. does not increase the number of people living, working on or visiting the site by more than 10%; or b. increasing the number of people living, working on or visiting the site, or vulnerable uses, difficult to evacuate uses or assembly uses by more than 10%, implements the recommendations of an approved bushfire management plan, which identifies measures that address the identified bushfire risk relevant to the development. AO9.2 Development provides alternative access routes that meet the road design requirements of items 1—7 in Table 8.2.5.3.C, for the following: a. an extension to existing premises which increases the number of people living, working on or visiting the site by more than 10%; b. the introduction of vulnerable, difficult to evacuate or assembly uses.	

Additional performance outcomes and acceptable outcomes if involving storage or handling on site of hazardous chemicals in quantities that would be equivalent to or exceed the threshold quantities set out in Table 8.2.5.3.D		
PO10 Development does not cause: a. unacceptable risk to people, property and the environment due to the impact of bushfire on the storage or handling on site of hazardous chemicals; b. excessive danger or difficulty to emergency services for emergency response or evacuation.	AO10 Development for storage or handling of hazardous chemicals: a. is not located within the bushfire overlay; or b. complies with an approved bushfire management plan prepared in accordance with the Bushfire planning scheme policy which identifies measures that ensure the development: i. mitigates the bushfire risk relevant to the development; ii. does not pose an unacceptable risk to people, public health and safety or risk environmental harm; iii. does not present significant difficulties to emergency services for emergency response or evacuation. Note—Bushfire management plans and site-based risk assessments are prepared in accordance with the Bushfire planning scheme policy. Guidance on the preparation of a hazard and risk analysis is provided in the Industrial hazard and risk assessment planning scheme policy. Note—Any risk mitigation measures, including construction of underground tanks or fire-protected above-ground tanks or package stores, are in compliance with AS 1940-2004 The storage and handling of flammable and combustible liquids.	
Additional performance outcomes and acceptable outcomes for essential community infrastructure		
PO11 Development for essential community infrastructure is located, designed and sited to: a. protect the safety of people during a bushfire; b. not create or increase the exposure of people to an unacceptable risk from a bushfire;	AO11 Development for essential community infrastructure: a. is ancillary to and not relied on for the provision of the essential service during a bushfire; or b. implements an approved bushfire management plan prepared in accordance with the Bushfire	

c. minimise the risk to vulnerable populations from a bushfire; d. mitigate the impacts on the community and environment from the effects of a bushfire on the development.	planning scheme policy which identifies measures that: i. ensure the development allows for safe and efficient emergency access and site evacuation during a bushfire; ii. do not pose an unacceptable risk to people on a premises during a bushfire; iii. ensure the development is not at risk of failure during a bushfire which results in health or safety risks or adverse environmental impacts; iv. enable people and property to be defended safely and effectively from a bushfire.	
PO12 Development for essential community infrastructure is able to function effectively during and immediately after bushfire events.	AO12 Development for essential community infrastructure: a. is ancillary to and not relied upon for the provision of the essential service during a bushfire; or b. containing elements vital to the function of the essential service during a bushfire is not located in the Bushfire overlay area; or c. implements an approved bushfire management plan prepared in accordance with the Bushfire planning scheme policy which identifies measures that ensure that: i. essential community infrastructure is able to function during bushfire events; ii. access necessary to maintain safety or function of the development is not compromised by a bushfire; iii. mitigation measures are not unduly reliant on human activation to respond to a bushfire;	

	iv. the safe storage of valuable records or items of cultural or historical significance, including storage of public records under the <i>Public Records Act 2002</i> , is able to be maintained during a bushfire event.	
Additional performance outcomes and acceptable outcomes if for landscaping or a park landscape plan is a requirement for development		
PO13 Development provides landscaping that does not create an unacceptable risk to people or property and provides for ongoing management of risk to the development and people from a bushfire.	AO13 Development is in compliance with a landscaping plan which: a. is prepared in compliance with an approved bushfire management plan; b. preserves the requirements of any building protection zone; c. does not increase the exposure of a habitable building not located in a building protection zone to a bushfire hazard. Note—The requirements of a building protection zone are shown in Figure b and Figure c.	
PO14 Development for a park is designed so that the park: a. is practical to maintain and requires minimal resources to be restored to its designed function and condition after a bushfire; b. provides for safe and efficient site evacuation and efficient emergency services access avoiding potential for entrapment during a bushfire; c. does not place unacceptable bushfire risk on an adjoining or nearby site, people and assets; d. provides efficient access for fire fighting; e. provides ongoing protection from bushfire for major park assets and buildings.	AO14 Development provides a park landscape plan that complies with a bushfire management plan prepared in accordance with the Bushfire planning scheme policy.	

Note—A bushfire management plan prepared in accordance with the Bushfire planning scheme policy can assist in demonstrating compliance with this performance outcome.		
Section C—If for ROL		
PO15 Development does not materially increase the number of premises exposed to unacceptable risk during bushfire events.	AO15 Development does not materially increase the number of people living or working in the Bushfire overlay area.	
PO16 Development is designed to: a. mitigate the risk of bushfire hazard to each lot; b. limit the spread of bushfire; c. achieve and maintain sufficient separation distance between development and hazardous vegetation to minimise bushfire hazard to future buildings during a bushfire; d. allow for emergency services access; e. locate buildings within a building protection zone Note—Lot size, location, configuration, dimensions and building measures are balanced to achieve an acceptable level of risk to future occupants. Note—A bushfire management plan prepared in accordance with the Bushfire planning scheme policy can assist in demonstrating compliance with this performance outcome.	AO16 Development requires that lot number, size, shape and layout allow for the siting of future buildings within the lowest hazard locations on the site being located: a. within a building protection zone in accordance with Figure b and Figure c; b. away from ridgelines and hilltop sites in compliance with Figure a; c. on land with a gradient less than 15%; d. preferably on east to south facing slopes and avoiding north to west facing slopes unless the slope is clear of vegetation and is not located in the High hazard buffer area sub-category or Medium hazard buffer area sub-category.	
PO17 Development promotes safe site access, avoids creating a potential entrapment situation and supports accessibility and manoeuvring for fire fighting during bushfires. Note—This includes easements and boundary realignments. Note—A bushfire management plan prepared in accordance with the Bushfire planning scheme policy can assist in demonstrating compliance with this performance outcome.	AO17 Development provides a lot layout which: a. provides direct road access and egress for new lots to public roads, rather than the creation of easements; b. in an urban category, avoids creating a new lot less than or equal to 2,500m² which directly adjoins hazardous vegetation; c. in an urban category, locates a future building protection zone to avoid a driveway of longer	

	than 70m from the road frontage to a habitable building; d. in a rural category, provides for an alternative access where the private access roads or driveways are longer than 200m to reach a public road.	
PO18 Development ensures that the road layout and design provides: a. efficient emergency services access to sites and manoeuvring within the subdivision; b. safe and efficient movement of residents, workers and visitors out of the subdivision and away from an approaching bushfire; c. safe and efficient movement of emergency services into the subdivision; d. alternative egress routes considering the most likely bushfire scenarios; e. ongoing availability and maintenance of access and egress routes for the purposes of evacuation and emergency services access. Note—A bushfire management plan prepared in accordance with the Bushfire planning scheme policy can assist in demonstrating compliance with this performance outcome.	AO18.1 Development involving a new road or fire maintenance trail is designed and constructed in compliance with: a. Table 8.2.5.3.C; or b. an approved bushfire management plan. AO18.2 Development has a road layout and design which: a. provides for alternative access routes to the subdivision, by public roads that meet the requirements in Table 8.2.5.3.C and are able to access the arterial road network; b. excludes cul-de-sacs, except where a perimeter road with a cleared width of 20m isolates the development from hazardous vegetation; c. does not include dead-end roads or if a dead-end road is unavoidable, it is a maximum of 60m long, or 200m where located in the Environmental management zone, Conservation zone, Rural zone, or Rural residential zone, and an alternative emergency evacuation and egress route away from the most likely source of bushfire risk is provided for lots where multiple road access or exit points are not possible; d. links road within the subdivision to, or provides for future links to roads in adjacent subdivisions. Note—Where staged development occurs or development is in accordance with an approved master plan, a temporary perimeter	

	road may be considered, subject to availability of reticulated water supply.	
PO19 Development involving new premises provides adequate infrastructure to support fire fighting.	AO19.1 Development involving new premises ensures that: a. lots have access to reticulated water supply and water pressure available for fire-fighting requirements with water supply and pressure that accord with the standards specified by the relevant utilities provider; or b. where reticulated water supply is not available for: i. residential lots, there is a minimum water supply available and retained for fire-fighting purposes in compliance with Table 8.2.5.3.B, which may be in the form of a separate tank or a reserve section as part of a main water supply tank; ii. development other than residential lots, onsite water storage is provided which is appropriate to the proposed future use according to the standards specified by the relevant emergency services agency and is not less than 5,000 litres. Note—Water supply for fire-fighting is in addition to water supply for household use. Where a non-reticulated supply of water is required, swimming pools, creeks and dams should not be used as a substitute for a dedicated static supply as these sources of water are not reliable during drought conditions. AO19.2 Development provides fire hydrants in accordance with Central SEQ Distributor-Retailer Authority, Queensland Urban Utilities (incorporating Water Services Association of Australia) standards.	

Section D—If for accepted development subject to compliance with identified requirements (acceptable outcomes only) or assessable development where in Potential impact sub-category	
PO20 Development is designed and constructed to reduce vulnerability to bushfire attack and addresses the bushfire hazard by a bushfire hazard assessment that: - utilises a fit for purpose methodology prepared in accordance with the State Planning Policy — State interest technical manual — Natural hazards, risk and resilience; - includes the following measures and inputs: - potential fuel loads for vegetation in its mature state from areas subject to revegetation or regrowth vegetation; - a published vegetation hazard classification dataset from the relevant fire authority; - forest fire danger index of 54 (AEP 5%); - potential flame length; - potential rate of fire spread. - is undertaken by a person suitably qualified and experienced with technical expertise in the field of bushfire hazard identification and mitigation, including protection of biodiversity values; - determines the relevant bushfire attack level for that part of the site in which development is proposed. Note—The Bushfire planning scheme policy provides advice about the sources of information to be consulted to determine areas subject to revegetation or regrowth vegetation and the hazard classification of that vegetation in its mature state.	AO20.1 Development is designed and sited in compliance with an approved bushfire management plan relevant to the full nature of the uses, which identifies the level of future bushfire hazard and the location of future hazardous vegetation affecting the development. Note—The Bushfire planning scheme policy provides advice about the sources of information to be consulted to determine areas subject to revegetation or regrowth vegetation and the hazard classification of that vegetation in its mature state. AO20.2 Development other than ROL determines bushfire attack level using: - potential fuel loads for vegetation in its mature state from areas subject to revegetation or regrowth vegetation; Note—In the absence of an approved rehabilitation and revegetation plan refer to Figure d—Regional ecosystem vegetation communities. - a published vegetation hazard classification dataset from the Relevant fire authority; - forest fire danger index of 54 (AEP 5%). Note—Revegetation and regrowth vegetation may be planned within the Potential impact sub-category on both private and public lands. The level of bushfire hazard posed by any areas subject to revegetation or regrowth vegetation is to be assessed as if that area had reached its mature state. A 'low' bushfire attack level must not be assumed in these locations even where the area is non-vegetated or vegetation is considered low threat in accordance with AS 3959-2009 Construction of buildings in bushfire-prone areas. The Bushfire planning scheme policy provides advice about the sources of information to be consulted to determine areas subject to revegetation or regrowth vegetation and the hazard classification of that vegetation in its mature state.

Table 8.2.5.3.B—Dedicated water supply requirements for residential lots without access to reticulated water supply

Development type	Water requirement
Lot less than 1,000m ²	5,000L per lot
Residential lot between 1,000m ² and 9,999m ²	10,000L per lot
Residential lot greater than 1ha	20,000L per lot
Multiple dwelling	5,000L per unit up to a maximum of 20,000L

Table 8.2.5.3.C—Road design requirements for emergency vehicle access

Item	Requirements	Public road	Private access roads or driveways	Fire maintenance trails
1	Horizontal clearance	6m total: minimum carriage way width of 4m with additional 1m wide strip on each side (clear of bushes and long grass) Note—Roads should provide sufficient width to allow fire-fighting vehicle crews to work around the vehicle with fire-fighting equipment.	A minimum formed width of 4m. Note—Gates must also provide for this clearance.	A minimum clearance width of 6m. A minimum formed width of 4m.
2	Vertical clearance	Minimum vertical clearance of 4m to any overhanging obstructions including tree branches.	Minimum vertical clearance of 4m to any overhanging obstructions including tree branches. 5m clearance to all powerlines	
3	Vegetation clearing	Maintained cleared vegetation 10m on either side of centre-line	Maintained cleared vegetation with minimum 6m cleared width	
4	Maximum grade	Maximum gradient of 12.5%	A maximum gradient of 12.5% where exceeding a distance of 70m from the road	A maximum gradient of 12.5% with adequate drainage to prevent soil erosion and minimise ongoing trail maintenance
5	Cross fall	Cross fall does not exceed 10 degrees	—	—
6	Surface rating	Minimum 15t rated surface for urban appliances, which do not operate on unsealed roads or trails; Minimum 6.5t rating for rural fire-fighting appliances.		
7	Pavement type	All weather		

8	Turning	For both public and private roads and fire maintenance trails: 6m inner radius 12m outer radius	
9	Access, passing and reversing	Reversing bays using the access to properties to reverse fire tankers, which are 6m wide and 8m deep to any gates, meeting above turning requirements; and/or A passing bay every 200m, 20m long by 3m wide, making a minimum trafficable width of 7m at the passing bay. Note—Some short constrictions in the access may be accepted where they are not less than the minimum 3.5m and extend for no more than 30m and where obstruction cannot be reasonably avoided or removed.	Fire maintenance trails provide areas for vehicles to pass or turn at intervals of not more than 400m with a maximum grade of 5%. Fire maintenance trails have vehicular access at each end. Fire maintenance trails are either located on public land or within an access easement that is granted in favour of Brisbane City Council and Queensland Fire and Rescue Service.

Note—Urban appliances do not operate on unsealed roads or trails. Urban appliances require 15 tonne rated surfaces. Rural appliances are typically 6.5t Gross Vehicle Mass (GVM)(4x4).

Table 8.2.5.3.D—Threshold quantities for hazardous chemicals

Item	Description of hazardous chemical		Threshold quantity
1	Flammable gases	Category 1	5,000L
2	Gases under pressure	With acute toxicity, categories 1, 2, 3 or 4	500L
3		With skin corrosion categories 1A, 1B or 1C	500L
4		Aerosols	10,000L
5		Not stated elsewhere in this table	10,000L
6	Flammable liquids	Category 1	500L
7		Category 2	2,500L
8		Category 3	10,000L
9		Any combination of chemicals from items 6 to 8 where none of the items exceeds the threshold quantities on their own	10,000L
10		Category 4	100,000L

11	Self-reactive substances	Type A	50kg or 50L
12		Type B	500kg or 500L
13		Type C to F	2,500kg or 2,500L
14	Flammable solids	Category 1	2,500kg
15		Category 2	10,000kg
16		Any combination of chemicals from items 12 to 15 where none of the items exceeds the threshold quantities on their own	10,000kg or 10,000L
17	Pyrophoric liquids and pyrophoric solids	Category 1	500kg or 500L
18	Self-heating substances and mixtures	Category 1	2,500kg or 2,500L
19		Category 2	10,000kg or 10,000L
20		Any combination of chemicals from items 17 to 19 where none of the items exceeds the threshold quantities on their own	10,000kg or 10,000L
21	Substances which in contact with water emit flammable gas	Category 1	500kg or 500L
22		Category 2	2,500kg or 2,500L
23		Category 3	10,000kg or 10,000L
24		Any combination of chemicals from items 21 to 23 where none of the items exceeds the threshold quantities on their own	10,000kg or 10,000L
25	Oxidising liquids and oxidising solids	Category 1	500kg or 500L
26		Category 2	2,500kg or 2,500L
27		Category 3	10,000kg or 10,000L
28		Any combination of chemicals from items 25 to 27 where none of the items exceeds the threshold quantities on their own	10,000kg or 10,000L

29	Organic peroxides	Type A	50kg or 50L
30		Type B	500kg or 500L
31		Type C to F	2,500kg or 2,500L
32		Any combination of chemicals from items 30 and 31 where none of the items exceeds the threshold quantities on their own	10,000kg or 10,000L
33	Acute toxicity	Category 1	500kg or 500L
34		Category 2	2,500kg or 2,500L
35		Category 3	10,000kg or 10,000L
36		Any combination of chemicals from items 33 to 35 where none of the items exceeds the threshold quantities on their own	10,000kg or 10,000L
37	Skin corrosion	Category 1A	500kg or 500L
38		Category 1B	2,500kg or 2,500L
39		Category 1C	10,000kg or 10,000L
40	Corrosive to metals	Category 1	10,000kg or 10,000L
41		Any combination of chemicals from items 37 to 40 where none of the items exceeds the threshold quantities on their own	10,000kg or 10,000L

Notes—

- In item 2, gases under pressure with acute toxicity, category 4, only applies up to a LC50 of 5000ppmv. This is equivalent to dangerous goods of Division 2.3 as defined in the Australian code for the transport of dangerous goods by road and rail.
- Item 4 includes flammable aerosols.
- If a flammable liquid category 4 is used, handled or stored in the same spill compound as 1 or more flammable liquids of categories 1, 2 or 3, the total quantity of flammable liquids categories 1, 2 or 3 must be determined as if the flammable liquid category 4 had the same classification as the flammable liquid in the spill compound with the lowest flash point. Example: For placarding and manifest purposes, a spill compound containing 1000L of flammable liquid category 1 and 1000L of flammable liquid category 4 is considered to contain 2000L of flammable liquid category.

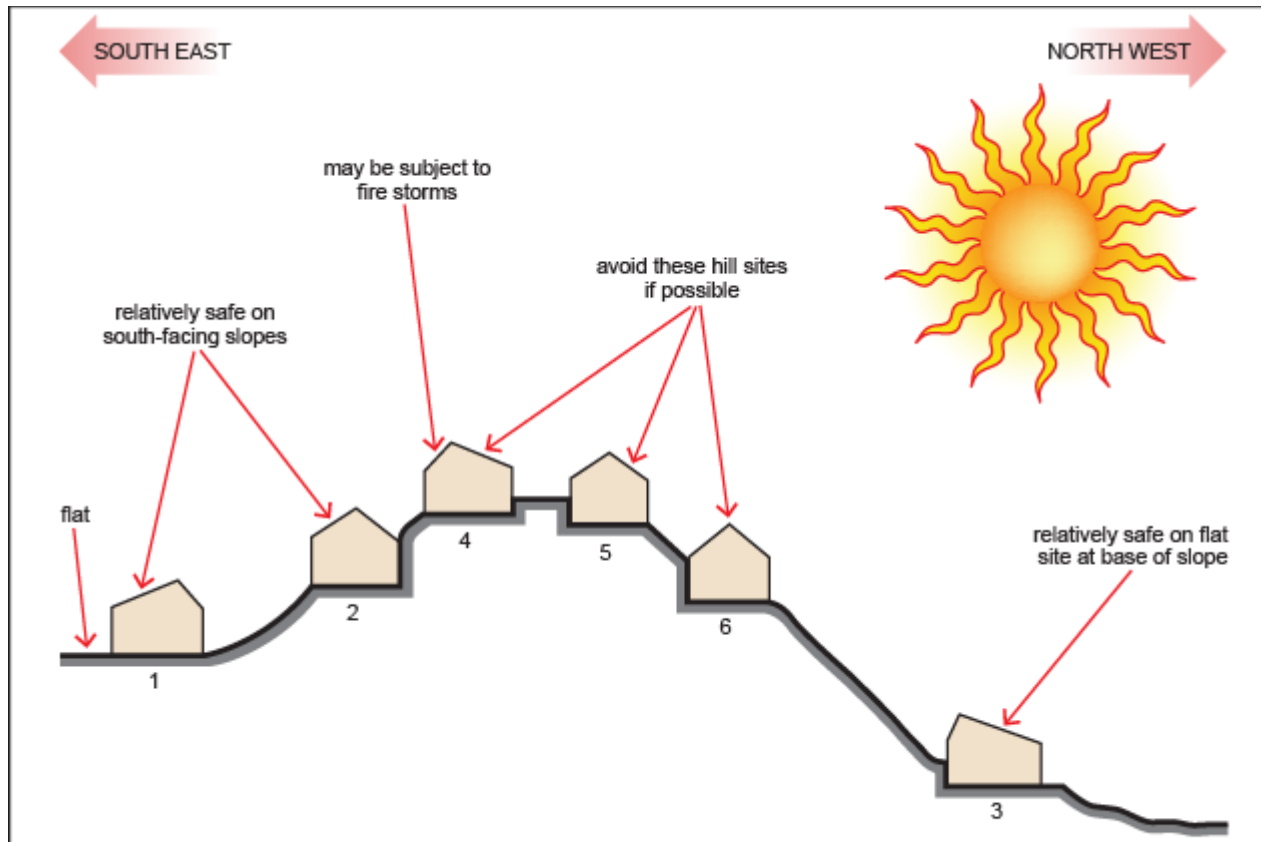


Figure a—Preferred building location to minimise bushfire risk intermediate

View the high resolution of Figure a—Preferred building location to minimise bushfire risk intermediate

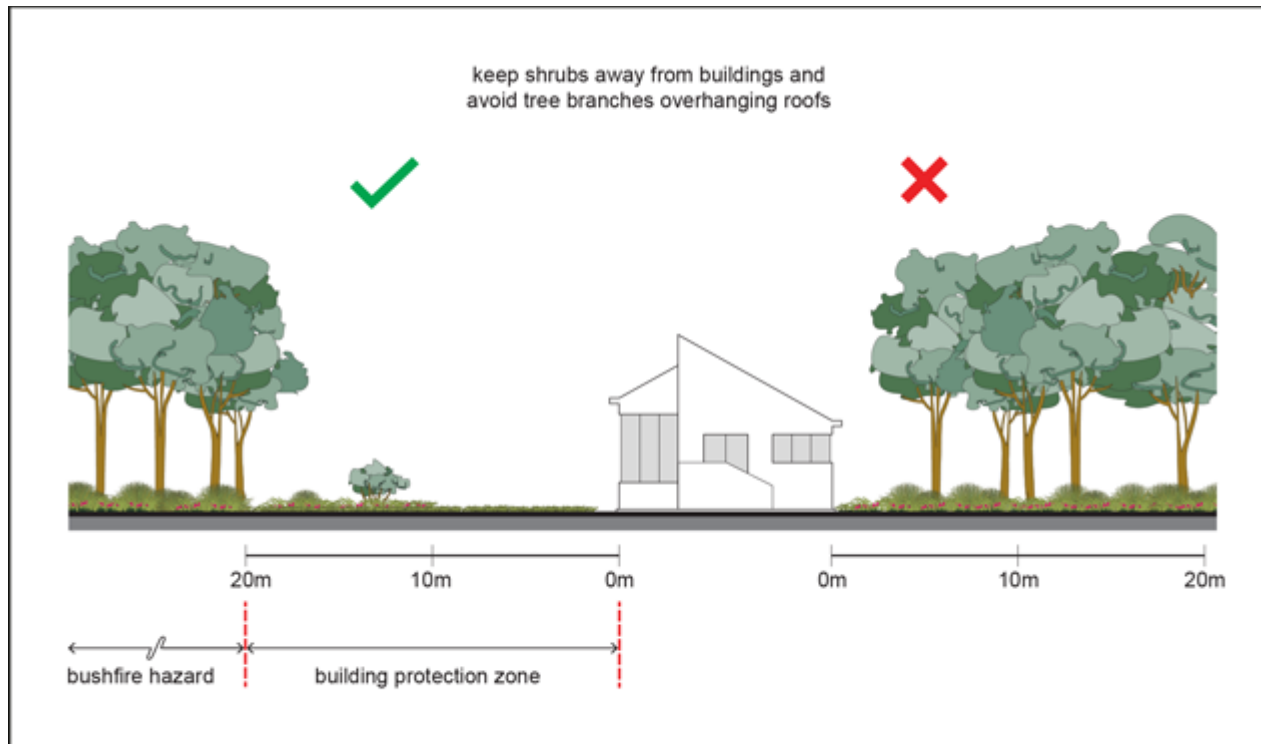


Figure b—Building protection zones

[View the high resolution of Figure b—Building protection zones](#)

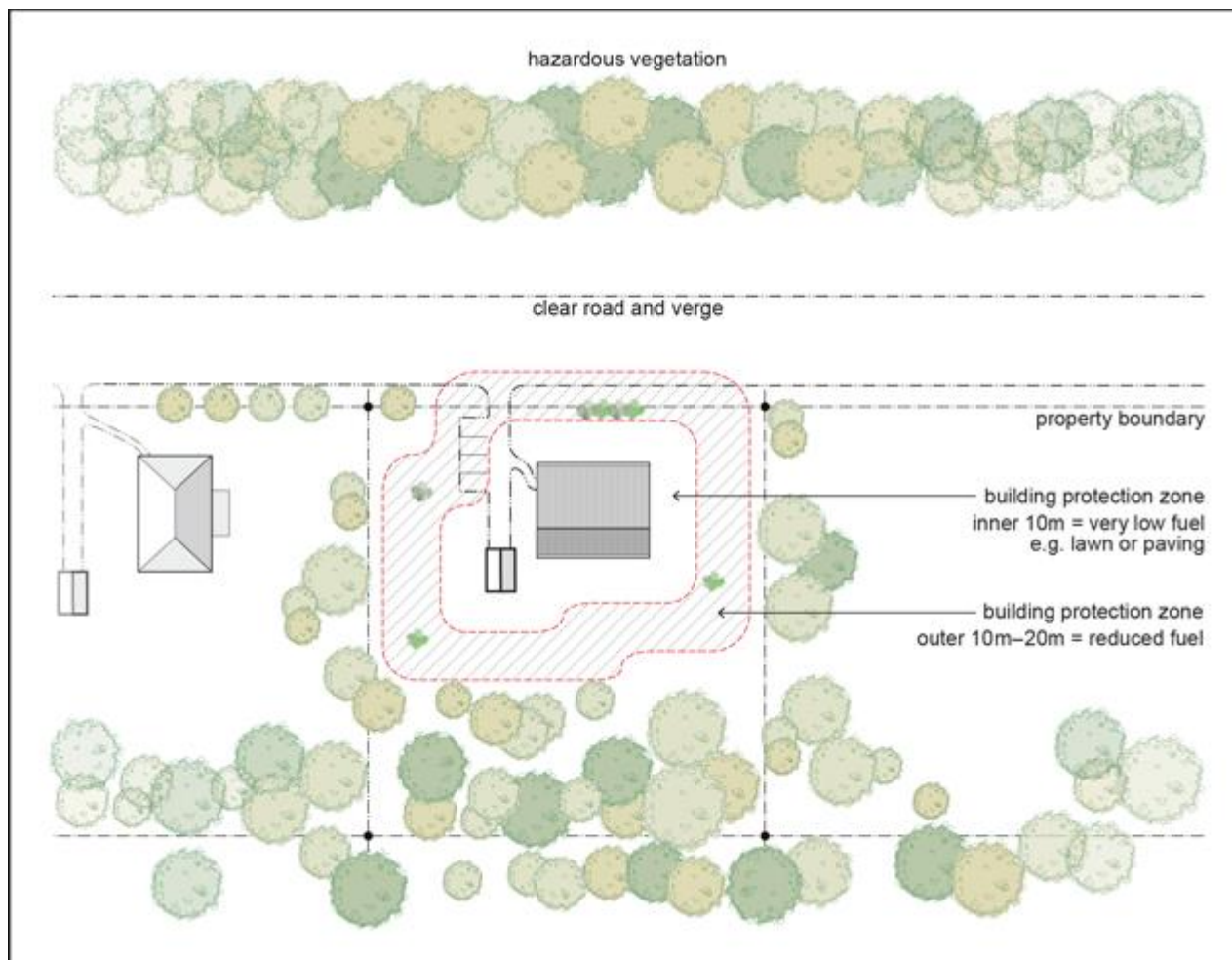


Figure c—Requirements for a building protection zone

View the high resolution of Figure c—Requirements for a building protection zone

Note—Building Protection Zone (minimum 20m):

The building protection zone may contain roads, bushfire management trails, cleared road verges, and on a site less than or equal to 2,500m² the building protection zone on a neighbouring site where the land use is compatible. The building protection zone includes all buildings and ancillary structures. Trees should be at least their mature canopy height away from buildings and not overhang the roof.

Inner 10m—Very low fuel area:

The inner 10m of the building protection zone directly adjacent to any building or structure is kept free of litter and may be paved or concreted, gravel or lawn. This zone prevents continuity of fuel such as shrubs, leaf litter build up, extending to the building. Trees are retained or planted as individual specimens and are a distance equal to their mature canopy height away from buildings. Trees do not overhang buildings.

Outer 10m—Reduced fuel area:

The outer 10m of the building protection zone may contain shrubs where not under trees, and trees may be retained or planted where spaced to avoid a continuous canopy across or into a site. This area is designed to reduce bushfire intensity, shield buildings from radiant heat, and prevent flames transferring from ground fuels to the canopy of trees. Trees are retained or planted sparsely or in small clumps to avoid providing a continuous canopy towards the building. Shrubs are not planted beneath trees as these act as a 'fuel ladder' to the tree canopy. Trees maintain a minimum of a distance equal to their mature canopy height away from buildings, and do not overhang buildings.

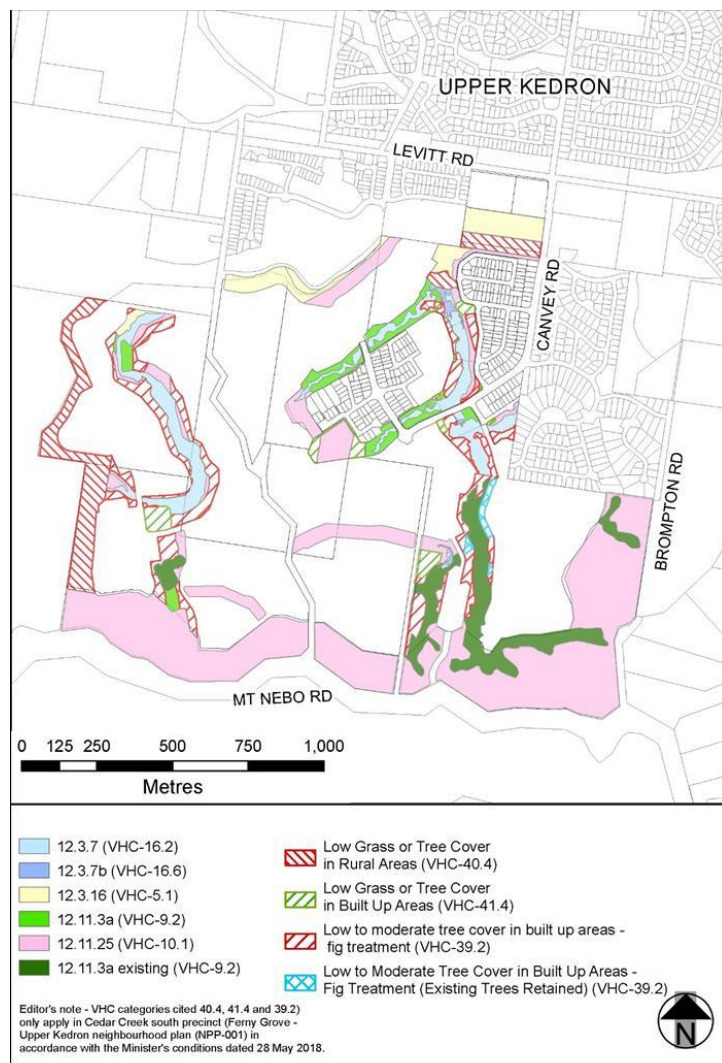


Figure d—Regional ecosystem vegetation communities

View the high resolution of Figure d—Regional ecosystem vegetation communities