Advanced
Bushfire Performance Solutions

Bushfire Assessment Report

s.100B 'Subdivision'

Lot 104 & 105 DP1051618
1442 Kurmond Road, Kurmond NSW

Hawkesbury LGA

Prepared for
Mathias, Galea & Mahboub

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Document Control

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20121203FAL BAR 1.0	201211203FAL	25-Feb-13	TO	Version 1
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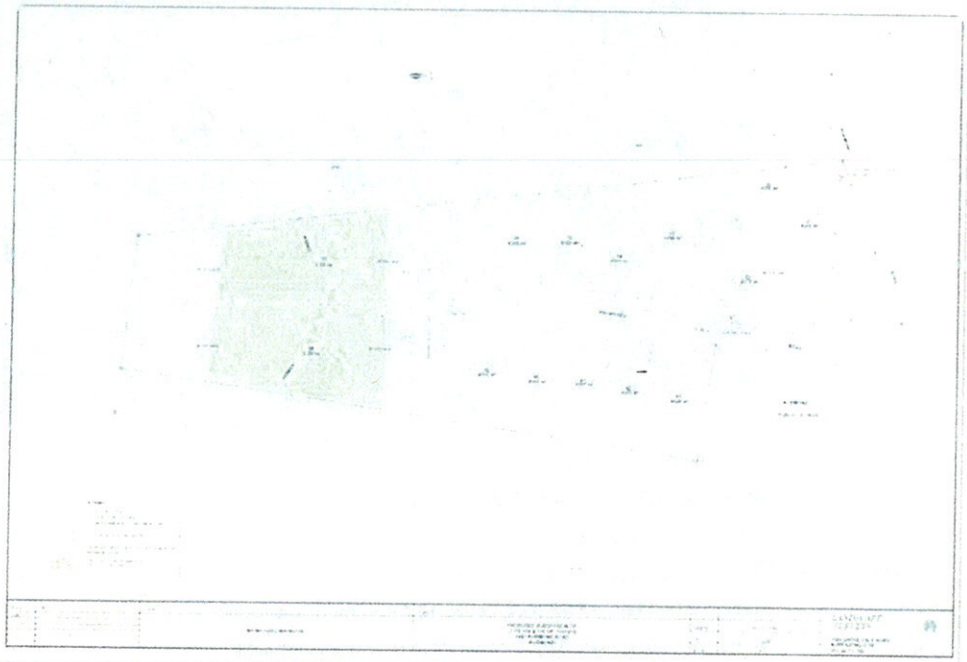
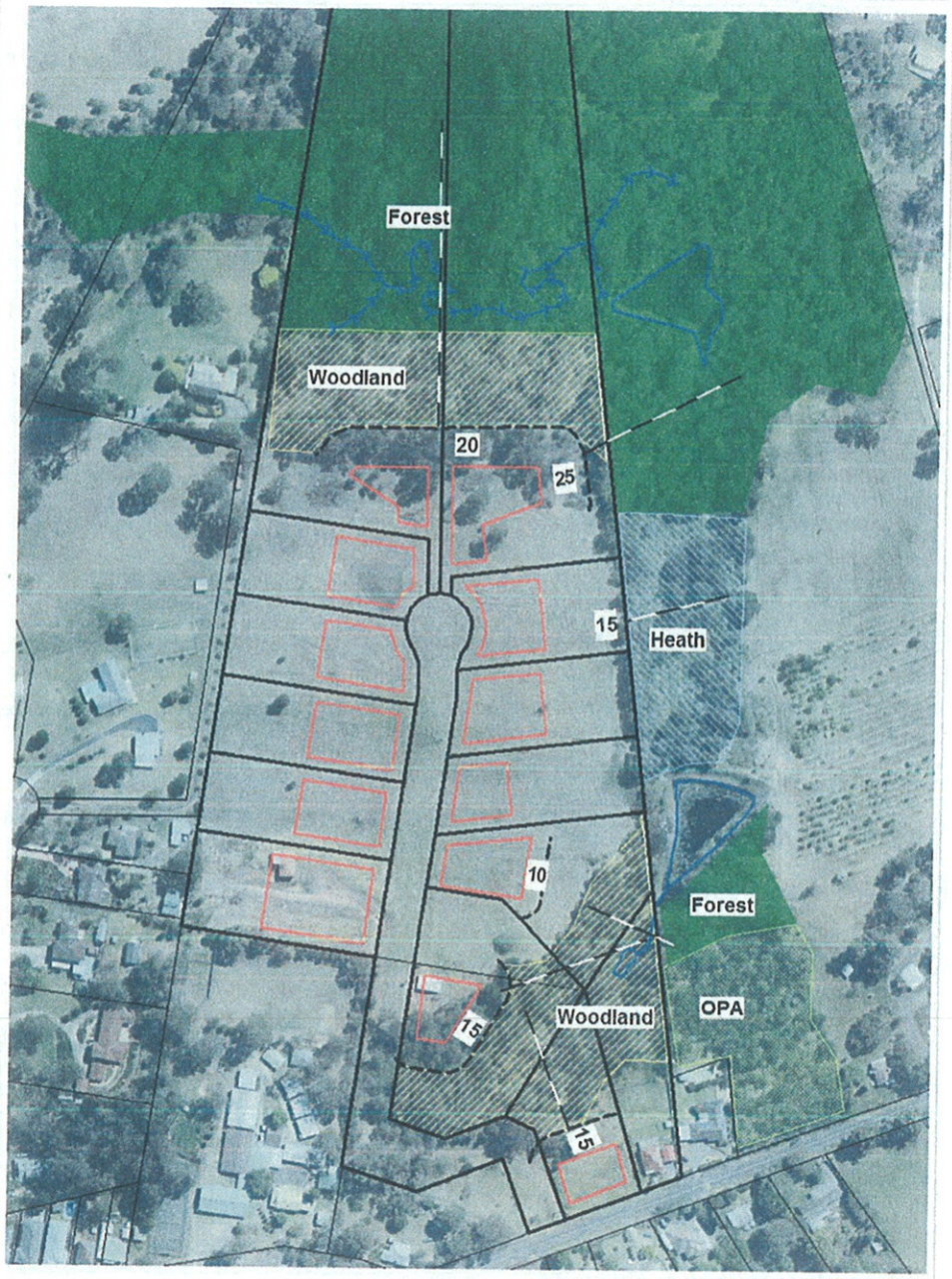
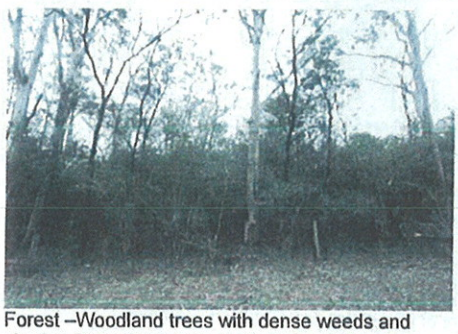
1 Proposed Development

Is the proposal on bush fire prone land	The site is within the bushfire prone land on the **Hawkesbury LGA** Bush Fire Prone Land Map.		
Does the proposal require a Bush Fire Safety Authority and referral to the RFS	YES ☑	NO	Proposal is subject to section.100B of the *Rural Fires Act 1997*
Does the proposal rely on alternative solutions	YES	NO ☑	Proposal relies on PBP2006 appendix 2 assessment methodology
Description	Subdivision (integrated development) of 2 existing lots into14 residential lots and an infrastructure lot. Lot 104 supports an existing dwelling in the southeastern corner and an incompletely relocated dwelling in the western portion. Lot 105 supports an existing storage shed Both lots are currently grazed by horses and adjoin a school to the southwest		
Plan			
Plan Reference	**Concept Plan**	**not dated**	

2 Assessment Details

Bushfire Assessmnt Plan	
Legend	Red polygon – building envelope Black/white dashed line - slope transects Black lines – proposed lot boundaries Blue line – drainage/creek line and dams Black dashed line – PBP2006 Table A2.4 minimum setbacks Numerical labels – PBP2006 Table A2.4 minimum setbacks

Aspect	Vegetation	Slope	Setback (reqd)	Complies
North	 Woodland – Tall trees and clear understorey. This area has the potential to regenerate to shrubby understorey is not managed	>5-10° Slope assessed as 8 degrees over approx. 48m (northern) transect	20m	Yes
North	 Shale Sandstone Transition Forest. Denser shrubby vegetation about the creek and further north. Heavy weed infestation	>0° Slope assessed as 3 degrees up-slope over approx. 88m (northern) transect	20m	Yes
North east	 Forest –Woodland trees with dense weeds and shrubs. Potential fir runs limited by existing dam and grassed paddocks	>0-5° Slope assessed as 3 degrees over approx. 88m (northeastern) transect	25m	Yes
East	Remnant tall heath - Regenerating woodland with dense weed and shrubs. Less than 50m perpendicular fire run. Most trees located along boundary.	>5-10° Slope assessed as 6 degrees over approx. 53m (eastern) transect	15m	Yes

South east **(Adjoining lot)**	 Remnant Woodland – Shale Sandstone Transition Forest. Most of visible canopy is managed land to OPA standards as an APZ to the adjoining lots residential dwelling. Provides additional hazard for an easterly fire run into the gully in the subject site.	>0-5° Slope assessed as 5 degrees over approx. 48m (south eastern) transect from base of gully edge of hazard near Lot 33 building envelop	10m	Yes
South	 Remnant Woodland/Gully forest – Dense wattle, and weed understorey. Management of weeds will produce a consistent woodland community. The extent of this remnant is an elongated stand covering approx. 1ha; however the area supporting an direct bushfire attack will cover less than 1ha.	>5-10° The gully provides a variety of slope vectors Steepest slope assessed as 8 degrees over approx. 56m (northern) transect perpendicular to potential Lot 31 building envelop	15m	Yes
South	 Remnant Woodland/Gully forest – Dense wattle, and weed understorey. Management of weeds will produce a consistent woodland community. The extent of this remnant is an elongated stand covering approx. 1ha; however the area supporting any direct bushfire attack will cover less than 1ha.	>0-5° The gully provides a variety of slope vectors Steepest slope assessed as 8 degrees over approx. 79m (eastern) transect perpendicular to potential Lot 32 building envelop	15m	Yes
South west	Managed	-	-	-
West	Managed	-	-	-
North west	Managed	-	-	-

Setbacks are based on management within the lots to Outer Protection Area (OPA) standards as a minimum (excluding areas contained within the woodland external to the minimum APZ setback).

Setbacks are designed to meet *Planning for Bush Fire Protection* 2006 (PBP2006) minimum setbacks in Table A2.4 for subdivision approval and may not equate to BAL-29 setbacks determined in AS3959-2009.

All proposed APZs are practical, do not compromise soil stability and negate potential crown fires within the APZ.

Water	Reticulated supply	Hydrant 50m E and 52m SW on opposite side of Road.	**Onsite Water Storage Tank**	Not Required	**Capacity**	-

The proposal will extend the reticulated mains network through the site to ensure that all potential building footprints are within 70m of a hydrant.

Electricity	Above ground	External to the lot	Under ground	Within the lot

The proposal will extend the power transmission lines into the site via underground networks

Gas	No gas services have been identified for this proposal

No information provided. Should gas be provided then it must comply with appropriate standards and ensure that it is shielded from direct bushfire impacts.

Public access road	Proposed road reserve is 20m wide and 400m long terminating in a cul-de-sac (with reserve 33m wide)

The proposal will create roads with a min 6.5m wide pavement (kerb to kerb), 2 wheeled drive and all weather. Cross fall will not exceed 3°.

Property access	Access handles to proposed lots 39 and 40 are 6m wide

The proposal will support complying property access roads to all lots

Environmental Impact

The site contains Cumberland Plains Woodlands to the northern portion and a smaller stand in the upper portion of the southern gully near the existing dwelling.

No details about aboriginal or heritage listed sites were provided for this assessment.

3 Bushfire Protection Measures - recommendations

Performance Criteria	Recommendation	Compliance
APZ	1. The lots shall continue to be maintained (up to the edge of woodland external to the minimum APZ setback) to outer protection area standards as described in the RFS documents; PBP2006 and Standards for Asset Protection Zones. 2. Vegetation within the southern gully (Woodland) shall be managed to remove weeds and restore to a native woodland structure consistent with Grassy Woodlands as described by *Planning for Bush Fire Protection* 2006 (p.54) • Trees 15-35 metres high • Crowns rarely touching • 10-30% foliage cover dominated by eucalypts • Understorey sparse low trees to tall shrubs • Ground cover of native grasses and herbs	Yes
Access	3. Public access road complies with the following requirements of s.4.1.3(1) of *Planning for Bush Fire Protection* 2006. a. Two wheeled drive and all weather b. A min 6.5m trafficable width c. Road cross fall no greater than 3° d. Provide a 12m outer radius turning circle or 12m x 6m (from centerline of road) deep turning bay e. Road curves are a min 6m inner radius with min distance between inner and outer curve of 6m f. Max grade 15° for sealed roads and a max average grade of 10° g. Min 4m vertical clearance	Yes
Services	4. Water, electricity and gas are to comply with the following requirements of section 4.1.3 of *Planning for Bush Fire Protection* 2006. a. Hydrants are easily accessible and marked by blue cats eyes in the centre of the road. b. Hydrants are located within 70m of all proposed building envelopes c. Hydrants comply with AS2419.1-2005 spacing, pressure and size d. Power transmission networks are located underground e. Reticulated gas complies with As1596	Yes
Landscaping	5. Landscaping within the development should adopt (where practical) the principles detailed in Appendix 5 of PBP2006. a. Moisture content of leaves should be high (250-400% of dry oven weight) b. Volatile oil content of leaves should be low c. Mineral content of leaves should be high d. Leaves should be thick (broad) with low area to volume ratio e. Density of foliage should be high and less permeable to air flow f. Continuity of plant form should be broken or separated	Yes

	g. Height of lowest foliage above ground should be maximised h. Size of plant should be wide spread rather than tall and narrow i. Dead foliage on the plant should be minimal j. Bark texture should be tight and smooth k. Quantity of ground fuels should be minimised l. Fineness of ground fuels should be minimised m. Compaction ability of ground fuels should be maximised n. Mineral content of ground fuel should be maximised	
Emergency	6. The occupier of the existing dwelling is encouraged to develop a Home Fire Escape Plan (see Appendix A).	NA

Appendix A - Home Fire Escape Plan

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NSW RURAL FIRE SERVICE

HOME FIRE ESCAPE PLAN

Revised 27/04/2005

FACT

Of the 144 home fatalities caused by fire that have occurred in NSW between 2000 and June 2005, the NSW Fire Brigades Fire Investigation and Research Unit advise that based on case study research, approximately one third to half those fatalities MAY have been prevented if the people concerned had, and had practised a home escape plan. (Statistics correct as of 24/08/2005)

HOME FIRE ESCAPE PLAN CHECKLIST

Every home and workplace should have a fire escape plan. Accidental home fires by their very nature can catch people unawares. Without an escape plan you are placing your life and your families' lives in jeopardy. For a safer home regularly practice the following escape tips:

- Know two safe ways out of every room
- Draw your escape plan on paper and discuss your escape plan with your family
- As you escape make sure you close internal doors behind you
- Decide on a safe outside meeting place eg. Near the letterbox
- Make sure that your windows and doors can quickly open if and when required
- Install smoke alarms: test them regularly and change the batteries at least every year
- Smoke alarms can alert you to a fire, an escape plan can then help get you out alive
- Practise your escape plan regularly with all your family members / householders
- If there is a fire in your home, do not wait, EVERY SECOND COUNTS, escape immediately and then call 000 from a neighbours home
- Once you get out, STAY OUT, never go back inside a burning building
- Remember to consider the special needs of children, the elderly or the disabled when developing your escape plan

A COLLABORATION OF THE NSW FIRE BRIGADES, NSW RURAL FIRE SERVICE, ACT FIRE BRIGADE AND ACT RURAL FIRE SERVICE

SAFETY TIPS

- Remember that smoke from a fire will make you confused and that you cannot see in smoke
- When asleep you will not smell smoke and it will in fact put you into a deeper sleep
- Oil, gas or wood heating units may require a yearly maintenance check
- Only ever use fuses of the recommended rating and install an electrical safety switch
- Home fire safety is important for the whole family and preparation can prevent a tragedy

000 EMERGENCY

FIREWISE