How do Residents in Bushfire Prone Areas View the Bushfire Risk of their Local Area and their Homes?

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University of Sydney
1. Residents perception of the bushfire risk of their local area and their own property

2. Which parts of their homes would residents seek shelter in during a bushfire and which parts would they avoid.

3. What improvements do residents believe might improve the ability of their home to respond to the local bushfire risk?
Locations (178 responses)

8 places in two regions:
- Blue Mountains, NSW: Mount Wilson, Linden, Lapstone, Emu Plains
- Central Coast, NSW: Pretty Beach, Wagstaffe, Hardys Bay, Killcare

Resident Groups (74 responses)

Representing:
- Mothers with dependent children
- Elderly / retirees
- Able bodied
- Able minded

252 Responses in Total
THE SAMPLE SITES

Mount Wilson
Blue Mountains, NSW

Pretty Beach
Central Coast, NSW
MOUNT WILSON
NSW RFS, COMMUNITY PARTICIPATION PROGRAM OPEN DAY 28 JULY 2012

Bush Fire Survival Map
Mount Wilson - DRAFT

What is your Bush Fire Threat?

Flame Impact
- Your property may be at risk from a low to moderate risk, based on your property's location and the surrounding land use.

Radiant Heat
- Your property is at risk of radiant heat from the fire, which can significantly damage your property and exceed the fire impact if you are not prepared.

Cinder Impact
- Your property is at risk of cinders from the fire, which can significantly damage your property and exceed the fire impact if you are not prepared.

Do Aware
- Entering from the fire can significantly damage your property and exceed the fire impact if you are not prepared.

Next, your property may be at risk of fire escaping the fire, which can significantly damage your property and exceed the fire impact if you are not prepared.

Your Bush Fire Survival Options

Always be prepared; a well-prepared family and home is more likely to survive.

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Mount Wilson

- **Extreme**: RFS Rate: 28, Residents Rate: 4
- **Very High**: RFS Rate: 14, Residents Rate: 9
- **High**: RFS Rate: 0, Residents Rate: 0
- **Medium**: RFS Rate: 0, Residents Rate: 2

Residents Rate the Bushfire Risk for their homes, Question 13: How do you rate the risk of bushfire to your current home.
MOUNT WILSON
WALL CONSTRUCTION AND RISK

Mount Wilson

- Hardiplank: 1 (Medium)
- Brick: 4 (Very high)
- Concrete block: 3 (High), 1 (Medium)
- Corrugated iron: 3 (High)
- Steel form, Colour bond siding, glass: 1 (Very high)
- Hebel blocks: 1 (High)
- Fibro: 1 (Very high), 1 (High)
- Metal as in site shed: 1 (High)
- Stone: 1 (High)
Factors in the surrounding area (18 out of 28)
- Lack of a hazard reduction for years
- Proximity to the National Park
- Bushland
- Steep slopes
- Closeness of trees to their homes
- Anticipated fire threat direction

Their bushfire preparation activities (7 out of 28)
- Regularly mown grass
- Cleared areas around house
- No overhanging trees
- Sprinklers with access to water tanks and generators

Construction of their house (3 out of 28)
Pretty Beach

- RFS Rate the Bushfire Risk
- Residents Rate the Bushfire Risk, Question 6: How do you rate the risk of bushfire in this locality?
- Residents Rate the Bushfire Risk for their homes, Question 13: How do you rate the risk of bushfire to your current home?

<table>
<thead>
<tr>
<th>Risk Level</th>
<th>RFS</th>
<th>Residents</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
<th>Very High</th>
<th>Extreme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extreme</td>
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<td>4</td>
<td>3</td>
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<td>0</td>
<td>0</td>
<td>1</td>
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<tr>
<td>Very High</td>
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<td>2</td>
<td>4</td>
<td>0</td>
<td>5</td>
<td>15</td>
<td>4</td>
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<tr>
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<td>5</td>
<td>0</td>
<td>4</td>
<td>7</td>
<td>4</td>
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<td>Low</td>
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<td>0</td>
<td>0</td>
<td>4</td>
<td>7</td>
<td>3</td>
</tr>
</tbody>
</table>
PRETTY BEACH WALL CONSTRUCTION AND RISK

Pretty Beach

- Fibro cement cladding: 1 extreme, 1 very high, 1 high
- Wood: 1 extreme, 1 very high, 1 high
- Brick: 1 extreme, 1 very high, 1 high
- Metal cladding: 1 extreme, 1 very high, 1 high, 2 medium
- Weatherboard cladding: 1 extreme, 1 very high, 1 high, 2 medium
- Wood/Fibro: 1 extreme, 1 very high, 1 high, 1 medium
- Brick & cedar weatherboards: 1 extreme, 1 very high, 1 high, 1 medium
- Concrete block: 1 extreme, 1 very high, 1 high, 1 medium
- Fibro/Hardyplank: 1 extreme, 1 very high, 1 high, 1 medium
PRETTY BEACH
RESIDENTS PERCEPTION OF THE BUSHFIRE RISK OF THEIR OWN PROPERTY

Recent bushfire (7 out of 18)
- Not being damaged by it
- Almost being damaged by it

Factors in the surrounding area (6 out of 18)
- Proximity to the National Park
- Bushland
- Steep slopes
- Neglect of maintenance by neighbours

Construction of their house (2 out of 18)
Mount Wilson

Range of Responses for Question 29: Places to Shelter & Question 32: Places to Avoid

<table>
<thead>
<tr>
<th>Place to Shelter</th>
<th>Place to Avoid</th>
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</thead>
<tbody>
<tr>
<td>Porch</td>
<td>6</td>
</tr>
<tr>
<td>Study</td>
<td>5</td>
</tr>
<tr>
<td>New Extension</td>
<td>5</td>
</tr>
<tr>
<td>Bathroom</td>
<td>1</td>
</tr>
<tr>
<td>Bedroom</td>
<td>1</td>
</tr>
<tr>
<td>Verandah</td>
<td>1</td>
</tr>
<tr>
<td>Cellar</td>
<td>1</td>
</tr>
<tr>
<td>Underneath water tank</td>
<td>2</td>
</tr>
<tr>
<td>Underneath swimming pool</td>
<td>1</td>
</tr>
<tr>
<td>Front of house (street access)</td>
<td>1</td>
</tr>
<tr>
<td>Kitchen</td>
<td>1</td>
</tr>
<tr>
<td>Laundry</td>
<td>1</td>
</tr>
<tr>
<td>Refuge room</td>
<td>1</td>
</tr>
<tr>
<td>Downstairs</td>
<td>1</td>
</tr>
<tr>
<td>Enclosed brick area (close to bushfire pump)</td>
<td>1</td>
</tr>
</tbody>
</table>
PRETTY BEACH
RANGE OF RESPONSES FOR ‘PLACES TO SHELTER’ & ‘PLACES TO AVOID’

Pretty Beach
Range of Responses for Question 29: Places to Shelter & Question 32: Places to Avoid

- Place to Shelter
- Place to Avoid

Bar chart showing responses for different locations and situations.
MOUNT WILSON & PRETTY BEACH
HIGHEST FREQUENCY RESPONSES FOR ‘PLACES TO SHELTER’ / ‘PLACES TO AVOID’

Mount Wilson & Pretty Beach
Highest Frequency Responses for Question 29: Place to Shelter & Question 32: Place to Avoid
- Place to Shelter
- Place to Avoid

- Bathroom: 9
- Cellar: 2
- Ground Floor: 2
- Downstairs: 2
- Nearby Bay: 2
- Large windows facing threat direction: 6
- Lounge/Living Room: 5
- Upstairs: 5
- Timber deck/extension: 3
- Part closest to bush, no exterior exit: 3
- Side facing bushfire threat: 2
- First floor, difficulty of escape: 2
WHICH PARTS OF THEIR HOMES WOULD RESIDENTS SEEK SHELTER IN DURING A BUSHFIRE AND WHICH PARTS WOULD THEY AVOID

For **Place to Shelter** the bathroom (9 out of 46) was the most popular choice. While there was a focus on the ground floor to facilitate escape.

**Place to Avoid** responses fall into four categorises:

- Spaces with large amounts of glass facing fire threat (6 out of 46)
- Lounge/Living room (5 out of 46)
- Upstairs (limited escape) (5 out of 46)
- Parts/sections closest to the direction of the anticipated bushfire threat (5 out of 46)
Mount Wilson & Pretty Beach

Improvements to your House / Features of other Houses

- Sprinklers: 10
- Shutters: 4
- Rebuild: 3
- Bunker: 2
- Clearing: 2
- Roof Sprinklers: 2
- Improv maintenance level: 2
- Cleared area around house: 9
- No timber decks: 2
- Brick construction: 2
- Fly screens: 2
- Preparation: 2
- Underground area/space: 2

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While a range of suggestions were given, there were primarily two architectural improvements to their homes that residents of Mount Wilson & Pretty Beach favoured.

They were:

- Roof and other sprinkler systems *(19 out of 46)*
- Bushfire shutters *(14 out of 46)*
1. Residents overwhelmingly give their area a lower bushfire risk rating than the NSW RFS.

2. For their homes they either matched the risk rating they had allocated to their local area or gave it a lowest ranking.

3. There is no difference between the way that residents living in newer homes attributed the risk to their homes and those living in older homes.

4. Previous experience of a bushfire did not significantly affect the way residents allocated the risk rating to their homes.

5. It was generally not the materials used in the construction of their homes that residents used to ascertain the bushfire risk of their home; rather it appeared to be factors in the surrounding area.

6. There were commonalities in the spaces residents suggested they would take shelter and avoid in their own house during a bushfire.
1. This research gives a clearer indication of the gap (after a CPP Open Day and a recent bushfire) between the bushfire risk ratings of the NSW RFS and residents of Mount Wilson and Pretty Beach, NSW.

2. Because residents often plan to shelter in bathrooms during a bushfire, new building construction may need to take greater care in the design and placement of bathrooms and ensuites in homes built in bushfire prone areas.

3. As residents living in AS 3959 compliant homes do not feel safer, it may appear to them that there is little justification in the additional expense this compliance costs.

4. If money became available for improving the bushfire performance of existing (non AS3959 compliant) buildings in bushfire prone areas, the following innovations are more likely to be viewed as valid by residents of those areas: roof and other sprinkler systems; bushfire shutters. These would need to be verified as viable bushfire prevention measures.
QUESTIONS

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