

SUBMISSION

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ENVIRONMENT AND NATURAL RESOURCES COMMITTEE

From: David Potts

To: Bushfire Inquiry
Environment and National Resources Committee
Parliament House, Spring St, East Melbourne 3002

I wish to respond to your inquiry with a narrative of my own experience of bushfires on and near my ten acre property in the Yarra Valley at 315 Menzies Road, Kangaroo Ground. The matters I raise are pertinent to several of the terms of reference you have listed, but need to be integrated into one argument. My story relates to a subsequent set of plans I have put in place on the top northern ridge of my property. Broadly these include using the ridge road as a firebreak, backed by a tin bund along my northern fence, the dense planting of wattles beyond the fence, retention of a line of existing eucalypts, and tight clearing of litter immediately beneath them). This is designed to prevent northern-origin fires descending into my paddock and my valley wetlands, to protect vegetation, wildlife habitat and food supplies, and/or slow down any fire to allow wildlife a greater chance of escape. To my knowledge, and from the response of the Nillumbik council and its fire advisers, such a multiple approach, with these objectives, has not been tried before. Yet there is random evidence that parts of the plan have been effective on previous occasions.

Background:

Severe bushfires in the summer of 1968-9, burned out several dwellings and properties in Kangaroo Ground, and swept from the north onto my own land - but only ran about half-way down the south slope (towards the Yarra River). At that time the artist Neil Douglas occupied a weatherboard cottage on the Eltham-Yarra Glen Road, just west of the Eltham College sports fields, and, on the east, next door to a property owned by the Osborne/Pelling family.

When the fires came through they left Neil's weatherboard house standing, but they totally destroyed the huge stone house of the Pellings - built in the 1860s, with walls made of limestone blocks about 45 cm wide. Ironically, not long before, the Pelling property had won a fire-protection award. A few days after the fire, Neil showed me around his place to explain his own protection methods and how they contrasted with those of his neighbors.

Neil had built earth 'bunds' or walls about two feet high all around his house, about fifteen to twenty metres away. Inside that area he kept the ground free of twigs and leaves.

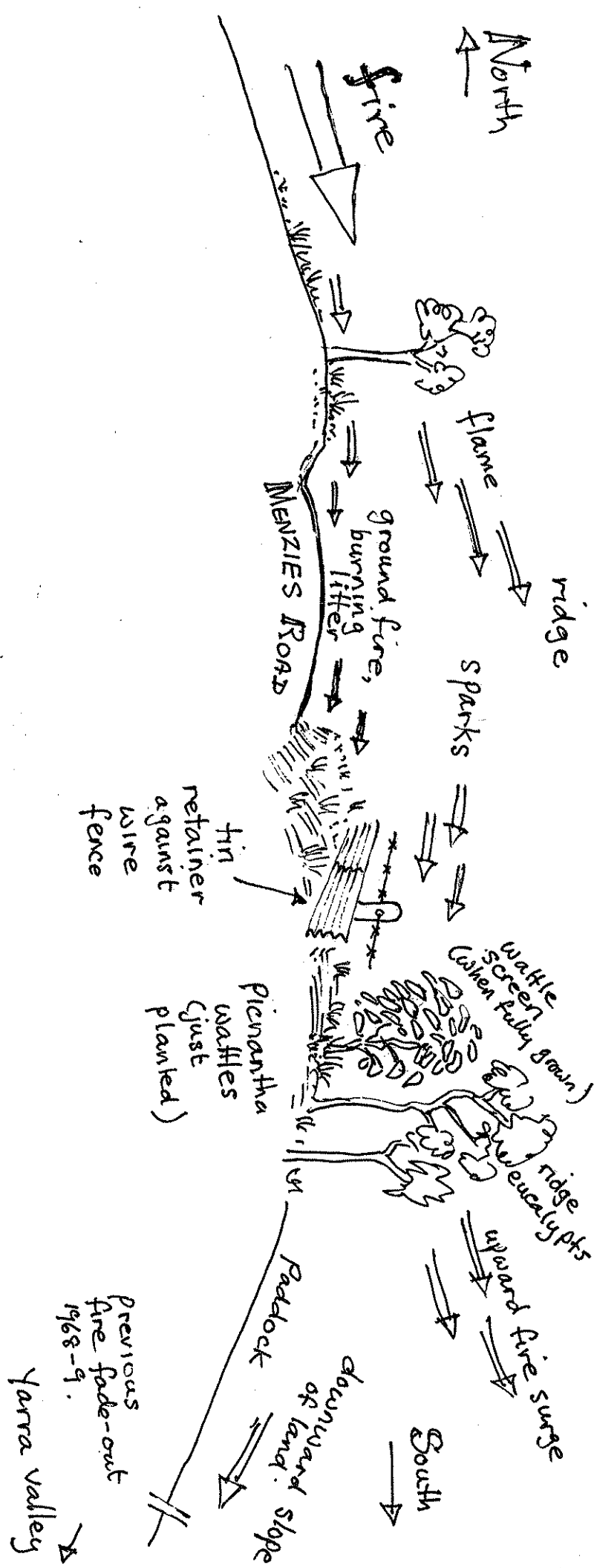
Close around his house, even over-towering it, a set of the full-grown eucalypts had not been cut. As the fire raged towards his cottage, the earthen bund trapped burning twigs and leaves that had been set alight and were burling along in the high winds, that is, a surge of burning material that would otherwise have been carried through to his weatherboard cottage and would have helped set the walls alight. He showed me ash of ground litter piled against the earth walls. It was about 15 cm deep. His second strategy had been that the eucalypts he kept close to the house, with their high canopies and exuding oil in the heat of the day, would hold the crown of the fire well up and let it sweep over the house without touching it. This appears to have been what happened.

By contrast, the Pellings had cleared all around their building for about a hundred metres, with no big trees nearby, and no earth bunds. On the fateful day, in the dense bush of a gully at the edge of their cleared space, the fire built up savagely, then, in a sort of fire-ball generated in the swirling of powerful winds, it burst out across the bare land and hit the house with full and unrestrained force. The walls did not burn, but in the sudden massive heat the house somehow exploded and the tiled roof was blown right off. I examined this property a few days later. Fragments of tiles could be seen up to fifty metres away. After the roof had gone, the whole interior went up in flames, including window frames and doors, leaving only a stone shell.

My own actions and justification for the experiment

At my own property I have build a sort of 'bund' or low wall at the top of my ridge (see accompanying drawing), using the ridge road as an initial firebreak and then stopping any further ground fire gaining momentum. This bund is not made of earth, but by my fastening old roofing (from a previously burnt out cottage) to a post and wire fence, at a tin-width height of 750 cm - a bit higher than Neil's retaining wall. I anticipate it would capture any burning material or sparks being swept low across the road that could generate a grass fire on my land. It would also, to a degree, protect the fence posts. Immediately behind that tin line, I have planted scores of wattles to reduce the impact of the first fire wave.

However, I have not removed any of the high trees on the ridge. High sparks might set alight the tree crowns, or they might just be sucked upwards by the exuded gaseous eucalypt oil and burn out in the air. Either way, the main fire coming from the north would have its own wind pushing it upwards as the land sloped downwards, a process that would cut off its fuel supply. This was presumably why the fire, when it reached my property in 1968-9, only burned part-way down the hill. I believe that with the bund, wattles and fuel reduction immediately beneath the trees on the ridge, a ground fire would not even get half way. The bund would also substantially protect anyone seeking to use the break-line as a position to beat out any falling sparks, should they make it, from generating a new ground fire.



An experiment in fire retardation at 315 Menzies Rd, Kangaroo Ground.

David Polts

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My idea has not yet been tested, of course. However, I have seen evidence that open fire-breaks are frequently ineffective, and comprise a huge corridor of destruction of native bushes and eucalypts. My approach allows for the use of a road as a pre-existing narrow break, backed by other measures: the tin bund and wattles and nearby clearing of litter beneath the large trees (which are left in tact; none cut down).

Unfortunately council has opposed it on various knee-jerk and improbable grounds - for instance arguing that it would be ineffective because the tin would 'buckle' and 'melt' (though the tin had already been through an intense fire and had not buckled or melted in any way). Council has also assumed flying sparks would negate the whole effect, but has not considered the effect of wind movement and downward slopes. It is operating on guesswork, which I am too, to a degree, but is not prepared to allow this justifiable experiment. It has ordered me to remove the tin bund. I am therefore appealing to you to recommend or try such an experiment independently in other areas.

Given that old roofing tin is readily available (often being taken to tips from old houses pulled down to be replaced with two-story mansions or sets of town houses) then tin bunds could be built along state park or private ridges and/or roads, backed up with dense bands of wattles and an accompanying line of litter reduction, at about the same expense as building wide, ugly and largely ineffective fire breaks. The tin bund would also give some protection to fire fighters on the ground.

There is one other advantage of a tin bund that I have calculated. Down my slope, a bund on the ridge helps me to safely leave occasional small piles of logs and branches as cover for small ground marsupials such as dunnarts, phascogales and agile aquinas - all of which I have seen on the block - as well as lizards and many ground insects. The marsupials especially need patches of protection in their never-ending battle to evade wild cats and foxes. Secondly, the tin would help control the savagery of over-zealous 'cool' burning, or reduce the need for it altogether. That in turn allows for more rotting logs and leaves for insects and hence food for other creatures - a better integrated natural range of opportunity for many forms of wildlife.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'D Potts', with a long horizontal flourish extending to the right.

David Potts (Dr.)