

**Newsome, Silvana (REPS)**

---

**From:**

**Sent:** Sunday, 15 June 2003 11:11 PM

**To:** Committee, Bushfires (REPS)

**Subject:** INQUIRY INTO INCIDENCE & IMPACT OF BUSHFIRES

P.S. Clark BSc BEcon Grad Dip Ergs MAusIMM

15 June 2003

This brief and belated submission addresses aspects of the following terms:

- (b) the causes and risk factors contributing to the impact ... and private property, and
- (f) the appropriateness of existing ... building codes ..

There has been conjecture over the reasons why some domestic houses are destroyed in bushfires while others survive. While some of the survival factors are adequately recognised, such as adequately-prepared owners staying to defend their homes, it is apparent that there are other as-yet unrecognised survival factors.

**It is submitted** that one significant *non-survival* risk, particularly associated with ember attack, may be tile roofing, particularly where the tiles allow 'significant' (undefined as to aperture, number and total effective opening area) ember access. Tile design, warpage in manufacture, tile deterioration or breakage and loss of tile pointing may all contribute to development of ember ingress probability. Where there is probability of ember ingress, there is at least equal probability of prior ingress over time of potentially-combustible leaf debris and dust, which will dry out over time. Bushfire ember ignition of leaf debris and dust in the roof space could ignite wooden roof structures and adversely affect electrical wiring on ceiling joists.

Where tile roofing exists in combination with conventional veneer wall construction, there is probability of combustible debris accumulating at the base of stud walls, on intermediate structures, such as window and door frames, nogging timbers and braces, and on electrical wiring located within veneer wall cavities.

There does not appear to have been any reported studies of this risk factor, and domestic residents in high bushfire risk areas have not been made aware of this potential risk to their properties. There are no reports of the need for or existence of equipment designed to clean potentially-combustible debris from roof and wall spaces in high risk areas. It was necessary to assemble my own vacuum cleaning equipment to remove dried leaf debris from our roof space.

**It is submitted** that the potential impact of this risk factor should be managed by:

- (1) awareness publicity for domestic residential communities in high bushfire risk areas,
- (2) encouraging study to identify its relevance and potential impact,
- (3) encouraging development of appropriate debris removal equipment for existing dwellings,
- (4) developing appropriate improved quality control criteria for residential construction components, design, construction practice and periodic maintenance.

*Philip S. Clark*