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**Submission Number: NND.001.01111**

**Submission Of: Philip Clark**

### Your Details

Email address:

Phone:

Preferred means of contact: Email

What is your submission based on? I am making this submission based on my personal situation

What was your personal situation in relation to the 2019-20 Bushfires? second try Experienced risk manager

Where do you live? Warrandyte Victoria high bushfire risk area

### Your Submission

In your experience, what areas of the bushfire emergency response worked well?

I was in hospital and very unwell at the time, so no opinion

In your experience, what areas of the bushfire emergency response didn't work well?

In your experience, what needs to change to improve arrangements for preparation, mitigation, response and recovery coordination for national natural disaster arrangements in Australia?

Is there anything else you would like to tell the Royal Commission?

Do you agree to your submission being published? Yes I agree to my submission being published in my name

Supporting material provided:

RoyalCommission2020submission.docx

Philip S. Clark BSc BEcon PostGrad Dip Erg

[REDACTED]

[REDACTED]

28 April 2020

Royal Commission

Dear Sirs and Madam Commissioners,

Please accept my submission for your consideration. As I am very unwell with continuing medical problems, the submission might be rather disorganised, for which please accept my apologies.

### **Author's background**

The author's professional background ranges through chemical engineering, metallurgy, economics and risk management to climate science research. He has reported on the quality of justifications for environmental and other proposed legislation in Australia, Canada, the United States and the United Kingdom since 1976. He has organised the Pound Road Warrandyte Community Fireguard Group since retiring in 1996 after ten years as Corporate Risk Manager for an Australian multinational manufacturing group.

### **What are the priority areas?**

The Royal Letters Patent nominate the priorities for the Commission. Top priority is bushfire in Australia with focus on prevention of loss of (presumably human) life. Loss of property, of wildlife and environmental destruction follow but without evaluation of their significance. The Letters Patent infer that climate change-related "longer, hotter, drier seasons and severe weather events" pose risks of bushfires, other natural disasters and our ability to cope.

### **Process issues rather than beneficial outcomes?**

Most if not all previous bushfire-related Commissions and Inquiries' recommendations tended to focus on process issues assumed to result in unquantified future beneficial outcomes. While process issues such as fuel reduction burning programs have some supporting evidence of effectiveness, there is a need to quantify optimal deployment levels, as past implementation of recommended measures has been inconsistent. The Commission has a unique opportunity to promote economic cost-benefit consideration of achieving nationally beneficial outcomes.

### **Conflict of interest problems**

The recent bushfires demonstrate that implementation of previous Inquiry recommendations has been less than adequate, often due to conflicts of interest, some real and some imaginary. Budget constraints, unfavourable weather, protection of biota are just the start. Cost-benefit analyses should quantify each of these competing factors to optimise the probability of a rational outcome.

A local example is widening of the bridge across the Yarra River at Warrandyte, Victoria completed in 2019. A wind-driven bushfire from the north would endanger the lives of residents in the forested north side who were apparently forecast to take more than three hours to access and cross the Yarra River bridge in an emergency evacuation. The next river crossings are 12 km down river and 26 km upriver. A VicRoads proposal to widen the bridge to improve peak period transit times was accepted by the Victorian Government rather than locally-proposed, cheaper and easier alternative emergency crossings. The bridge widening is understood not to have achieved the original significantly reduced evacuation time objective. An anonymous internet critique at

highlights conflict of interest issues perceived to have adversely affected achievement of the evacuation objective.

### **Winds the key factor in creating dangerous bushfires**

The most often reported bushfire control is management of ground level combustible litter as most bushfires burn up from ground level rather than upper level foliage 'crown' fires. While bushfire issues certainly include supply of combustible fuels, of combustion air and ignition sources, the most relevant bushfire hazard is wind. Two key issues are wind-blown ember ignition of downwind combustibles and the ability of wind changes to complicate the fire front. High temperatures, low humidity and drought conditions do not *per se* create bushfires until an ignition source starts a fire.

### **But could wind provide an answer?**

Although winds have long been identified as a key bushfire danger factor, there has been no interest in using 'the enemy' wind to protect life and property from adverse bushfire impacts. The CSIRO 'external water spray system' developed 20 years ago used small petrol or diesel powered pumps but the water it sprayed was mostly wasted by windage and evaporation loss. A proposal by the present author using Savonius or similar wind turbine-powered pumps to flood irrigate and protect at-risk properties was rejected without comment by the Bushfires CRC, CSIRO and CFA Victoria

### **Longer, hotter, drier seasons and severe weather events**

**Reference term b:** The presumption that "longer, hotter, drier seasons and severe weather events" might develop in future years flows from publications of the United Nations Environment Program agencies (UN FCCC and UN IPCC). Their pseudo-scientific predictions result from UN political agenda, cherry-picked data and assumptions rather than scientific studies and have been shown to be inappropriate and incorrect. The UN political marketing campaign claims that 'greenhouse gases' specifically carbon dioxide are causing dangerously increased global temperatures, rising sea levels and adverse weather conditions. The fact that all such climate changes are within the range of previous naturally occurring climate experience is conveniently omitted in their marketing.

Regrettably, most if not all Australian governments, agencies and universities have adopted the UN marketing package in their own undisclosed local political interests. These misinformation documents often commence with legal disclaimers.

### **Community Fireguard (CFG)**

The Victorian CFA Community Fireguard program is a highly commendable approach to equipping communities to prepare for and cope with inevitable bushfire risks. Our Warrandyte community has been gazetted as at high risk of bushfires. The appended pages below are recent examples of our activities.

### **Other issues**

One significant but apparently unreported (which poses its own questions) factor associated with house destruction in the 2003 ACT bushfire was ember ignition of plastic gas service pipes under the eave lines of many of the lost properties in the suburb of Chapman. Our gas-fired home heating unit was installed in 2011 with plastic supply pipework, posing questions about applicable standards.

Another bushfire risk issue is the combustible leaf, dust and debris in the roof and wall spaces of most conventional homes, which can ignite during or after a bushfire due to ember entry into the roof space and damage to exposed electrical wiring posing problems when power is restored. Detailed advice about the range of similar potentially uncontrollable ignition areas

in homes is necessary, subject to the needs to ‘keep it simple’ and intelligible for the average home owner.

## **WELCOME to your 2018-19 Bushfire Phone Tree.**

Please check your Phone Tree names, phone numbers and calling sequence now - and advise your Fire Tree Head promptly if there are any errors in your contact details. Discard all *non-YELLOW*-colour Phone Tree lists, as there are some changes again this year. Please keep your mobile phones **fully charged** with you and on during high fire risk days to make sure you receive alert messages. Each Phone Tree family calls the next family in their Tree in sequence until the Tree Head is called by the last family on the Tree to close the communication loop. We will run one or more **Phone Tree ‘dummy runs’** soon to ensure we’re all ready for the bushfire season.

Please ensure that all members of your family keep their Phone Tree cards with them.

### **BUSHFIRE SURVIVAL PLANS**

Do you have a bushfire safety plan? Your plan needs to be more than a simple ‘stay or go’ decision, to address the probability of not getting an advance fire warning or of being unable to leave while it’s safe to go elsewhere.

Most Pound Road Fireguard member families plan to "leave early." But when is “early” for you? The risk on *Code Red* days is more than 2½ times greater than for *Total Fire Ban* days. Does your “leave early” plan mean before 10 AM? Where do you plan to go? Do your important family members know where you plan to be? Have you practised your “leave early” plan with all the things you could need, like children, pets, vital financial, insurance papers, address books and family photos (on USB sticks)? Did you also take clothing and toiletries in case you need to be away more than one day or if your house is damaged?

Do you have a written Plan B in case you are unable to leave early. When did you last practise your Plan A and your Plan B? Leaving late increases the risk of being caught by bushfire at home or on the road due to fallen trees, smoke and emergency vehicles.

Do all your family, children's schools and friends know where you plan to be when you leave early? Have you advised a phone number elsewhere where they can enquire about your safety rather than ringing you when you might be busy coping with a bushfire?

All families in our Fireguard Group live in a high bushfire risk area. Even if your home was surrounded by green concrete, the risk from windblown bushfire embers and debris is effectively the same for us all. Embers can penetrate roofs, ventilators and under doors, lodge on window sills and crack windows, and collect under car tyres.

**Bushfire safety planning** must be treated as a **year-round task**. Here are some items to start your thinking:

**Before the bushfire season** is the time to plan the safety of your valuables and documents -- legal, financial, insurance, family history, films, photos, etc. Assemble your protective clothing kits and renew your first aid kit. Fit fresh smoke alarm, torch and radio batteries and purchase dry sand for door and window sills. Remove all flammable (petrol, solvents) and combustible (leaves, wood, any burnables) materials well away from buildings or off-site.

**Before high risk days** recharge mobile phones, cancel appointments, remove fallen leaves from paths, remove doormats and deck blinds, check hoses, stored water, buckets and ladders in place, test run fire pump and store cold drinking water and electrolyte bottles in insulated containers. Backup computers to USB, store in green bags. Notify family.

**Early on high risk days** close doors, windows, curtains (partly) while ensuring visibility for awareness, remove all door mats, fit security cord on your glasses, monitor radio ABC774 for bushfire messages, have fully charged mobile phone with you.

**If bushfire alert and you’re still at home**, put on protective clothing, put sand/wet towels under external doors, window sills and gaps, wet down around house and buildings, put ladders at internal

roof accesses, remove batteries from smoke alarms, unplug non-essential electrical items, unlock all doors and leave keys in locks.

**If bushfire nearby**, patrol for embers, check roof space regularly, take hoses, buckets, mops inside, drink regularly

**When fire arrives**, patrol for embers, up, down and in roof space, check windows and outside situation, drink regularly..

**After fire front passes**, patrol for embers including in roof space (8-10 hours), extinguish any problem fires (no cold water on hot windows!!), keep drinking. Replace smoke alarm batteries when smoke has cleared. Phone family members.

### **TRIPLE ZERO (000) CALLS**

If you ever need to call *Triple Zero (000)* for an emergency, what location information will you use? Your street number is a start, but is your number clearly visible after dark? How many metres are you from your nearest street corner – and what is its name? Do you know the GPS (global positioning system) coordinates of your home? What is the number on the power or phone line pole nearest to your property – in case of a power pole or vehicle impact problem?

### **EMERGENCY VICTORIA WEBSITE**

Take a moment to check out the Emergency Victoria website, so you know what it offers.

### **POUND ROAD COMMUNITY FIREGUARD GROUP NEWSLETTER 2 March 2020**

We've survived another season without bushfires anywhere near us. We hope that coronavirus keeps its distance, too.

### **DUMMY PHONE TREE RUN RESULTS**

5 of our 7 Phone Trees completed their loops within 15 minutes and some did better than our 10 minute guideline. Those loop times are OK, as the 10 minute guideline assumes a Worst Case of a fire started in Pound Bend Park area.

### **PROPOSED BUSHFIRES ROYAL COMMISSION**

It is understood that a Royal Commission is to be held on the 2019-2020 season bushfires. Will repetitive Royal Commissions eliminate the loss of lives and property due to bushfire?

### **FIREGUARD TRAINING**

The virus rules have changed how we can run training sessions. Our first session is "How can we load and use the Victorian Emergency App on our smartphone or computer." We've heard that some iPhone users had problems loading the App. We've asked our CFA trainer Troy Lowther to assemble some "How To" notes that we can send to our Fireguard families by email.

### **VIC EMERGENCY APP INFORMATION**

#### **Warnings**

**Evacuation:** An evacuation is recommended or procedures are in place to evacuate.

**Emergency Warning:** You are in imminent danger and need to take action now. You will be impacted.

**Warning (Watch and Act):** An emergency is developing nearby. You need to take action now to protect yourself and others.

**Advice:** An incident is occurring or has occurred in the area. Access information and monitor conditions.

**Community Information:** A newsletter containing updates for communities affected by an emergency.

**Warning Area:** Colour area shows the predicted warning area at the time of issue. This colour can be yellow (Advice), orange (Warning / Watch & Act), red (Emergency Warning) or black line with a grey fill (Evacuation).

#### **Incidents**

**Fire - Not Yet Under Control:** The reported location of a fire. This may be a bushfire, grassfire, building fire, fire alarm or non-building fire. The location of the icon shows where the fire has started but does not show how far it has spread.

**Fire - Contained, Under Control, or Safe:** The reported location of a fire.

**Planned Burn:** The general location of a planned burn that is currently underway on public land. Firefighters are managing the burn but flames and smoke may be visible.

**Flood:** Indicates the location of reported flooding that may be impacting on houses, roads, property and other infrastructure.

**Vehicle Accident:** The reported location of an accident or incident involving a car or other motor vehicle and wash aways.

**Aircraft Accident:** The reported location of an accident or incident involving a plane, helicopter or other aircraft.

**Rescue:** The reported location of a person trapped as a result of a industrial or recreational accident, trench or structure collapse, or a similar incident.

**Hazardous Material:** The reported location of a spill or leak of a hazardous liquid, gas or solid. includes petrol, diesel, etc.

**Earthquake:** An earthquake or other land-based seismic event has been recorded and reported by

**Landslide:** The location of a reported landslide event.

**Storm:** A [Bureau of Meteorology](#) warning has been issued for thunderstorms, hail and/or blizzards in this area.

**Tornado/Cyclone:** A [Bureau of Meteorology](#) warning has been issued for a tornado or cyclone in the area.

**Damaging Winds:** A [Bureau of Meteorology](#) warning has been issued for strong or damaging winds in the area.

**Building Damage:** A request has been made for assistance to help make a damaged building or structure safe.

**Tree Down (traffic hazard):** tree or branch that has fallen in the area – it may be blocking or impacting a path, track or road.

**Fallen Power Lines:** A request has been made for assistance to remove a fallen power pole or power lines in the area.

**Medical / Human Health:** The reported location of a human health incident or a request for medical assistance.

**Animal Health:** The reported location of an animal health incident or a request for animal rescue.

**Oiled Wildlife:** The reported location of Oiled Wildlife or a request for animal rescue (Oiled).

**Dangerous Animal:** The reported location of a dangerous animal.

**Insect Plague:** Reported location of an insect plague such as locusts. [Read more \(external link opens in new window\)](#)

**Dam Failure:** The reported location of a dam failure.

**Shark Sighting:** Reported location of a shark sighting. This is likely to result in a beach closure by [Life Saving Victoria](#)

**Water Pollution:** The reported location of polluted waterways either inland or marine.

**Plant Health:** The reported location of a significant plant health or disease incident.

**Other:** This could be an equipment fault, inspection, trivial call, or an operation to assist another agency.

#### **Outages and Restrictions**

**Total Fire Ban:** A Total Fire Ban is currently in force for this area.

**Road Closed / Affected:** There is a partial or full road closure at this location.

**Rail Disruption:** Rail services have been affected.

**Airport / Airspace Restrictions:** Air services have been affected. This may result in cancellations, delays or closure.

**Power Outage:** A power outage has occurred in this area.

**Gas Outage:** A gas outage has occurred in this area.

**Water Outage / Affected:** Water has been affect or is unavailable in this area

**- NOW READ THE OTHER SIDE -**