

HIGHTAILING INTO THE FIRES: BUSHFIRE PLANNING ON ACT HORSE AGISTMENT CENTRES



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DEFINITIONS

GLOSSARY

Agistor	a person who pays to keep their horse on someone else's land.
Agistment Centre	used interchangeably with agistment property, a place where horses are agisted.
Agistment property owner	used interchangeably with agistment owner, a person/s who has a lease with the ACT Government over the land for agricultural purposes. This person/s may or may not manage or run the agistment business.
Agistment Manager	person who runs an agistment business (who may or may not have a lease on the land).
Relocation	used in preference to evacuation.

ACRONYMS

FFW	The ACT Farm Fire Wise program
AFAC	Australasian Fire Authorities Council
ACT ESA	Emergency Services Agency
ACT RFS	Rural Fire Service
BAP	Bushfire Action Plan
COAG	Council of Australian Governments
SBMP	Strategic Bushfire Management Plan (Version 2) 2009

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1. EXECUTIVE SUMMARY

Canberra currently has the highest number of horse owners per capita of any city in Australia. There are over 1000 horses currently kept on agistment centres (both public and private) in the ACT, predominately owned and cared for by females of varying ages. Often leading to the participation of the whole family unit. Many horse owners spend a lot of time with their horses, and in doing so are placing themselves in locations of high risk from bushfire.

This, coupled with the tragic first hand experiences at horse agistment properties during the 2003 bushfires led the ACT Rural Fire Service (RFS) to commission a study into the bushfire operational planning of ACT based horse agistment properties. The study aimed to provide the RFS with a better understanding of this industry and their needs, based on knowledge of their current bushfire planning practices. In doing so the RFS plans to provide more relevant and effective support and assistance to this key stakeholder group, provide accurate and helpful information to its members on bushfire, as well as investigate how it can better engage and work with horse owners.

Following a comprehensive literature review, semi-structured interviews were conducted with all horse agistment owners/managers onsite. In all, twenty five horse agistment managers were interviewed on sixteen horse agistment properties. Fifteen key informants were also interviewed along with nine agistors¹ from five centres.²

The report confirms that horse agistment managers face a complex task in preparing and planning for the event of fire on their properties. They need to consider the safety of themselves, their family, any employees as well as the protection of their own and agisted stock. In addition, they must also consider the safety of any agistors who may be present on their property at the time of a fire.

The report found that whilst having a bushfire plan was seen by the vast majority of agistment managers as important, the level of detail of their plans varied significantly. Horse agistment owners/managers acknowledge the importance of the Farm FireWise program (FFW) as a reliable tool for their bushfire planning, especially the value obtained from the individual property visits by RFS staff. However, this report has highlighted the need for more industry specific references in the FFW documentation, particularly around the issues of agistor presence. One of the more significant findings of this report was that the nationally endorsed “Stay and defend or to Go early” policy did not cater for the horse agistment industry, which is particularly concerning as a lot of emphasis is placed on early evacuation.

The findings clearly demonstrated that there is a shared responsibility across the industry, from horse agistment owners/managers, horse owners and the ACT Government through the ACT Rural Fire Service and Government horse paddocks.

¹ Two key informants were also agistors

² See Appendix 8.1 for list of interviewees

Recommendations have been divided into three sections, those for Agistment Owners / managers; Agistors and the ACT RFS. The study has identified the need for a more thorough approach to bushfire planning for lessees/managers. This would be done through improvements to the FFW program so as to better meet the specific needs of this industry including investigating ways for the RFS to provide targeted bushfire information sessions to horse owners and the provision of more formal bushfire training opportunities for all involved. The RFS will also provide information from this report to Brigade members so that when they are sent out to help protect these establishments and community members they have a better understanding of how to work with horse agistment managers to protect people, properties and horses from bushfire. People who agist their horses on fire prone land need to plan for their own safety in the event of bushfire.



2. INTRODUCTION

Large bushfires have burnt across the ACT in the summer almost every decade since the establishment of the ACT in 1911.³ Of these, the January 2003 bushfire caused by far the most damage with 87 rural homes, 414 suburban homes and most of the Stromlo observatory buildings destroyed. In all 164,000 hectares of land was burnt.

Four people lost their lives in homes, or fleeing the fire front in 2003. Less publicly canvassed were the significant numbers of severe injuries sustained in the fire including burns, lung and eye damage. Similarly less well known is the loss of, and injury to, animals. This loss includes valuable stock and horses belonging to rural properties as well as those horses owned by Canberra residents who were agisted on rural properties along the rural-urban interface. An estimated five thousand sheep, several hundred cattle and fifty horses were killed or destroyed as a result of injuries sustained.⁴

As a result of these statistics and the high population of horses and horse ownership in the ACT, the ACT Rural Fire Service commissioned this project to investigate bushfire planning and preparation on horse agistment properties in the ACT. This was to be a first step in improving their understanding of key stakeholder groups. The project was partially funded by the Commonwealth Attorney General's Department under the National Disaster Mitigation Program 2009-2010.

The aim of the project was to provide useful information to the RFS for the purpose of gaining a better understanding of this key stakeholder community group. The Service also intended to look at the current bushfire planning processes for agistment properties in order to better assist and support managers in future planning, with a particular focus on the presence of agistors during a bushfire. The views of horse agistment managers were sought not only to better inform the service but to also share ideas and practices across the group.

Unlike many cities in Australia, Canberra does not have a rural interface characterized by small holdings or "hobby farms". While these holdings exist in nearby NSW, the ACT rural land has very few small acreages. The properties surrounding the city have restrictions on subdivision and are used mainly for cattle, sheep or horse agistment. Currently Canberra has the highest numbers of horse owners per capita of cities in Australia.⁵

Many horse owners of Canberra therefore rely on agistment centres to house their horses rather than keeping them on their own property. Over one thousand horses are currently kept on agistment centres in the ACT (both private and public). Many owners keep more than one horse either for sport, recreation or as companion pets (or a combination).

³ 1919; 1925;1938;1951;1978;1982;1984; 2002.

⁴ Hayward, 2003.

⁵ Williams 2006.

Horse ownership is increasingly characterized by a culture of concern for horse welfare and owners invest much time and money in caring for their animals to a high standard. Many horses are visited once or twice a day, are groomed, rugged, fed and have their health regularly monitored. This level of care means that owners spend much time on agistment properties and, in the event of bushfire, will do all they can to rescue their horses from danger.

Horse Agistment Centres in the ACT are mostly run by landholders who have a lease on the land. In the ACT, rural landholders are expected to play a key part in bushfire mitigation. They are responsible for the bushfire plans, mitigation activities, response and recovery on their own property as well as playing a significant role in the rural landscape as a whole.

Horse agistment managers face a complex task in preparing and planning for the event of fire on their properties. They need to consider the safety of themselves, their family, any employees as well as the protection of their own and agisted stock. In addition, they must also consider the safety of any agistors who may be present on their property at the time of a fire, and whose presence they can influence but ultimately have limited control over.

⁶ Burr, 2009



2.2 BACKGROUND

On the day of the catastrophic firestorm in 2003, hundreds of horse owners went to the horse agistment property where their horse(s) were kept in an endeavor to save them from injury or death. Many evacuated their horses safely prior to the fire front, but many were caught by the fire front as they attempted to move their horses. Four people were severely injured on one agistment property⁷ alone.

Six properties had one hundred percent of the land burnt in 2003 with various levels of asset damage. Five additional agistment properties were directly threatened in 2003. Two of the Territory agistment paddock complexes were burnt in 2003. Territory agistment have been involved in several fires prior to and including 2003, with two directly threatened by fires in 2001.

2.2.1 BUSHFIRES AND GOVERNMENT POLICY

Bushfires are a part of Australian life, it has to be accepted by the Australian people that bushfires often cannot be put out, despite resources and the best intentions of bushfire services. It is for that reason efforts are focused on minimizing the risk of, and mitigating the harm done, by bushfire.

The government employs what they refer to as a “structured risk management process”, consistent with the Australian Risk Management Standard.⁸ Emergency management outlines the phases of this process:

- Research
- Prevention (risk modification⁹)
- Preparedness (readiness¹⁰)
- Response
- Recovery

In 2005 a National Inquiry was held on bushfire mitigation and management by the Council of Australian Governments (COAG). The authors of the report lamented a lack of national bushfire principles and made a suggested list of which three of the suggested principles are most pertinent to this study:

While the risk of bushfire can be modified, it cannot be entirely prevented, strong self reliance (of individuals and communities) is required based on fire knowledge.

A philosophy of shared responsibility between communities and fire agencies is needed for bushfire management and mitigation. “Well informed individuals with suitable levels of preparedness complement the role of bushfire agencies and offer the best way of minimizing bushfire risks to lives, property and environmental assets.”

⁷ McLean, 2003.

⁸ Council of Australian Governments 2005

⁹ Preferred term by the COAG National Inquiry

¹⁰ Preferred term by the COAG National Inquiry

Protection of the lives of firefighters and the community is the highest priority.¹¹

This study is contributing to the research of community bushfire planning with a particular focus on the preparedness phase of risk management. Currently preparedness within the community is largely focused upon householders preparing to face bushfires threatening their homes. The slogan ‘Stay or Go’ has become the short hand for the AFAC policy position encouraging the decision of householders to “Prepare, Stay and Defend your Property or Go Early”.¹² This policy reflects the traditional practice of rural Australians to stay and defend their properties, but emphasizes making a considered choice to do so, otherwise to leave early. This is based upon previous evidence from Australia’s history of bushfires where people were thought to be less likely to be killed if defending a home that offered suitable shelter rather than fleeing at the last minute¹³, the idea that “houses protect people and people protect houses”. However, this policy has been brought under the spotlight in recent years, particularly after the 2009 bushfire in Victoria.¹⁴ While full discussion of this policy is beyond the scope of this report the policy as it currently stands is a relevant part of the context.

All rural landholders in the ACT are required to prepare a Bushfire Action Plan (BAP) to fulfill the requirements of the following:

Land (Planning and Environment) Act 1991 through individual Land Management Agreements;
Emergencies ACT 2004; and
Strategic Bushfire Management Plan 2009.

ACT Farm FireWise is an ACT government initiative that has been set up to assist rural landholders to prepare their Bushfire Action Plans. However, rural landholders are seen to be historically quite self sufficient in dealing with bushfires that threaten their homes and livelihoods. Farm FireWise provides farm visits by an expert on fire planning to assist landholders devise a plan. Importantly, Farm FireWise does not include the dimension of non-resident animal agistors in their information guide, which is targeted at rural landholders and their families, who are ‘farmers’ in the traditional sense.¹⁵

As a result, agistors as a population have not received structured or consistent education or bushfire awareness training. This leaves the population of horse owners, who spend a significant amount of time on properties where they keep their horses, with few resources in the face of fire. While there is excellent material available to assist horse owners who own their own property to devise a bushfire plan that incorporates the needs of horses there is a dearth of material to assist rural landholders who do horse agistment to include the dimension of agistor presence in any comprehensive way.

¹¹ COAG 2005 p.11

¹² Haynes et al 2008

¹³ Haynes et al 2008

¹⁴ Handmer 2005, Manne 2009.

¹⁵ See ACT Rural Fire Service “Information Guide Farm Firewise” 2007

3. METHODS

3.1 AIMS AND OBJECTIVES OF THE STUDY

3.1.1 AIM

To improve the ACT Rural Fire Service's knowledge and understanding of Canberra based horse agistment, and as a result improve future support to people involved with horses through the assistance of developing plans and information.

3.1.2 OBJECTIVES

The main objectives were:

To create informative profiles of this key stakeholder group to better inform RFS brigade members;

To collect ideas about bushfire planning in general and to explore the ideas of managers, in particular surrounding the presence of agistors;

To reflect on the experience of past fires and consider what was done well and what could be done differently; and

To develop recommendations for the RFS to assist in this area of planning.

Secondary objectives were to:

Understand what agistors may wish to see included in a plan at their centre; and

Gain a picture of the presence of agistors on horse agistment properties in past bushfires

3.2 LITERATURE REVIEW

A review of the literature was undertaken in the following areas:

Government policy within the ACT and other states around Australia relating to bushfire preparation.

Bushfire community safety journals for example the Journal of Emergency Management, Fire Australia and social research (Bushfire Community research Council publications).

Horse industry and more general rural industry relating to bushfire prevention or preparation (for example Department of Primary Industry Fact Sheets, Australian Horse Industry Association publications and various horse/pony club publications).

Horse welfare relating to exposure of horses to bushfire including veterinary texts and horse magazines which emphasize horse welfare issues (eg. Hoofbeats Magazine).

The following databases were searched:

The Australian Public Affairs database (APAIS)

Factiva (Newspaper articles on bushfire experiences for horse owners)

¹⁶ See Pearson 2009

Keywords included:

- Horse/equine agistment/property
- Horse/equine industry
- Horses/bushfire/fire/burns
- Pets/bushfire
- Bushfire risk management/safety/preparation/mitigation/planning
- Stay or Go policy
- Bushfire refuge

The literature review provided valuable contextual material on government policy and practical information on bushfire management planning. There is a large body of national and international literature on bushfire planning specifically focusing on the householder and rural dweller. A considerable emerging body of research on the social context of bushfire community safety within Australia and the United States of America is contributing to the understanding of such issues as perception of risk and elements of the choice to prepare for bushfire.

There is considerable material designed to assist horse/pet owners living on their own rural or semi-rural properties to prepare for bushfire. However, the literature review yielded little material within Australia or internationally specifically on the issue of bushfires and horses within the context of keeping a horse on a property not owned by the horse owner.

The literature informed the discussion of the findings throughout the report.

3.3 INTERVIEWS

Semi-structured interviews were conducted with all horse agistment managers onsite. Twenty five horse agistment managers were interviewed on sixteen horse agistment properties. Fifteen other key informants were also interviewed along with eleven agistors¹⁷ from five centres¹⁸. The number of other key informants interviewed were not in significant number to ensure comprehensive representation. Discussion with these informants early in the process however, provided valuable contextual material to assist with the design of the project.

¹⁷ Two key informants were also agistors

¹⁸ See Appendix 8.1 for list of interviewees

3.4 HORSE AGISTMENT CENTRES

Horse agistment centres differ in size, paddock configuration and facilities, which have been roughly divided into the following categories:

- **Large broad acre** holdings (over 250 hectares) with broad acre agistment, herds of horses grazing in paddocks, no stables, no indoor arena (e.g. Territory Agistment Paddocks).
- **Large combined (stables/paddocks)** holdings with broad acre agistment and varying amounts of stabled agistment but **no indoor** arena (e.g. Milapuru, Riverview, Lions Youth Haven, Monaro Park, Hillview, Pine Ridge).
- **Large combined (stables/paddocks)** with broad acre or 'private' paddock¹⁹ agistment and lots of stables and an **indoor arena** (e.g. Stromlo, Canberra Equestrian Centre, National Equestrian Centre, Freshford)
- **Small holdings with stables** only (few or no paddocks) and **indoor arena** (e.g. Forest Park, Equestrian Park, Noble Park, Gooromon Park).
- **Small holdings with stables** and **no indoor** arena (e.g. Bendora).

Several factors of the centre configuration are of significance for bushfire planning. Some centres have a centralized set up, with the arenas, office, parking and stables in one area. Others are very spread out with several parking areas spread over the whole property. Those with private paddocks usually have facilities for parking at each paddock. Those private paddocks that have shelters constructed by agistors have the additional feature of a built asset that the agistor is responsible for maintaining.

Those centres with built structures have a range of buildings that could provide a refuge for horses or people. On almost all the properties there are yards that are available for horses to be put temporarily, providing feed or shelter. The centres with stables have a variety of different buildings. Some are in large stable blocks, others are individual stables set in paddocks dotted around the property.

As with all businesses, horse agistment is very diverse with differences in scale, clientele and varying styles of management. Most are run by the landholder themselves but some are managed by contracted staff. The Territory Agistment paddocks are run by a manager contracted by the ACT Government. Some also have a very strong sense of community among agistors. Different agistment centres have different agistor profiles.

Simply put, centres with stables and an indoor arena tend to have more young agistors. Broad acre properties tend to have older agistors. However, the Territory agistment paddocks often have young people starting out owning a horse and have a more mixed profile.

¹⁹ Small paddocks that hold small numbers of horses usually owned by a single owner. On some properties this includes a horse owner or landholder constructed shelter

Centre	Horse No	Agistor No	2003 burnt?	Agistors present In 2003 fire
Bendora	12	8	n	NA
CEC	170	200 approx	y	y
Forest Pk	100	35	threat	y
Gooromon	26 (15) agisted	9	threat	
Hall E	36	30	n	NA
Hayshed	35	25	n	NA
Kerrabee	200			
(inc school)	40 - 50	y	y	
Monaro	30	20	n	NA
Noble Park	17 own 4 agist	4	n	NA
Pine R	65	50	threat	y
Riverview	56	40	y	y
Stromlo	100	100	y	y
Territory Agistment	300	180	y	y
Tully	22		threat	y
Youth Haven	60	30	y	y

Table 1 Agistment Centres details as at July 2010

Most centers employ no or few staff but there are some that are quite large and employ considerable numbers of staff. Many of the centres have their agistors visit daily, some twice daily. In addition to the agistors several centres run riding schools, which increases the traffic on the property considerably.

4. FINDINGS AND DISCUSSION

This section begins by looking at horse ownership in Canberra and the experiences of agistors in a recent bushfire and follows with a short section on horses in bushfires. The report then covers the specific findings on bushfire planning on horse agistment centres.

4.1 PROFILES

4.1.1 HORSE OWNERSHIP: A CULTURE OF HORSE WELFARE

ACT has the highest per capita horse ownership in Australia. There are currently over one thousand horses on the properties included in this study with approximately seven hundred owners (this is an estimate only as many horses are owned by a family). In Australia over 80% of those engaged in equestrian activities are women,²⁰ which was found to be representative of the ACT according to those interviewed. In fact, many women are reported to have moved onto the urban edge to be near their horses.²¹

A new concern for the physical, mental and emotional welfare of horses has emerged in the last decade encouraging more sympathetic training methods and improved health care.²² As horse trainer Andrew Mclean puts it – they are now a companion and a friend.²³ While riding is a key motivation to own a horse, many people spend a lot of time with their horses even if riding is not very important to them.²⁴

What this means for the study is that there is a very diverse population who spend a considerable amount of time outdoors in the rural environment, not just riding but spending time with their horse. As a result they form a very strong bond and a sense of responsibility for their horse. The thought that they may be burnt in a bushfire is extremely difficult to accept. The stories below demonstrate how far people were willing to go for their horses in the 2003 bushfires and need to be read with the knowledge that many people suffered injury, some extreme, on these horse properties while attempting (many unsuccessfully) to rescue their horses.

Eleven agistors were interviewed for this study nine of whom had experienced fire on the property where they kept their horse in 2003. In addition, stories written by agistors and professionally published²⁵ (some of who were also interviewed in this study) have provided valuable information about agistor's presence on properties in the 2003 bushfires in Canberra.²⁶ All the agistors who retold their stories went to their horses on the day of the fire, either for routine care or to protect them in some way from the bushfire. What emerged from

²⁰ Burr 2009, p73.

²¹ Burr 2009, p78

²² Burr 2009

²³ McLean, A. 2003, p17

²⁴ Burr 2009, p83

²⁵ Matthews 2003

²⁶ See Appendix for the text of several of these published stories

the stories²⁷ of these agistors is the enormous commitment people have to their horses. One agistor, who rode out the fire with her horse sheltering in a shed that had the roof torn off in the wind, wrote:

We were surrounded. The smoke was getting denser but Miranda showed no signs of distress or concern. She stood calmly as I walked over to her and draped the wet towel over her nose. ...I knew it would not be possible to persuade Miranda to come into the shelter, I was spending most of the time with her out in the yard in the smoky wind, one hand holding the towel over her nostrils, the other keeping mine draped about my head and face....it was impossible to see anything – the air was thick with eddying debris. Eyes closed and a towel wrapped around my head and face it was all I could do to try and save myself; there was no question of doing anything for Miranda.

Whilst this agistor was prepared with wet towels and safety clothing, she was putting herself at great risk being outside in a bushfire. As she concluded herself as she crouched in a shelter whose roof was torn off in the wind:

“it was all I could do to try to save myself; there was no question of doing anything for Miranda”

Human safety did not feature as a paramount concern in many of these stories. Many stories of ‘close calls’ were relayed in interview and stories written after the fire:

It was sheer luck that a man in the suburb saw me and told me to shelter under an underpass – and the fire went over the top of us while I stood under the underpass with the two horses. The horses were perfect, didn’t move. I felt panicked but they were fine.

The girls (aged 14 and 15 at the time) led the horses into the suburbs, wearing t-shirts and shorts! We floated the other horses out. I was so worried about the kids after I dropped the horses off, we didn’t know where they were. ...the kids got disoriented. Twenty minutes later it was mayhem, stables on fire, people’s cars on fire – one had a boot full of hay that went up. One friend drove back into the fire to get something she had forgotten.

Many agistors rushed out to the paddocks too late and were stopped by roadblocks.

A sense of commitment to the agistment centre was also evident in the stories. This connection to the land and the people is a characteristic of this community.²⁸ Agistors wanted to stay and help as well as to evacuate or be with their horses.

I went into the paddock to catch my horse and met the agistment manager who said “just go” and I didn’t want to leave my friend and the place, I was so attached to the place.

Several agistors commented that early relocation was highly successful and they would endeavor to do it again. Interestingly one agistor remarked that she had been teased about relocating, as this was seen as overly cautious. The lack of information about the fire was also a consistent theme.

²⁷ See Appendix 8.2

²⁸ Burr 2009

There was no media information – except news that it was far away and emergency services had it under control.

It is an important finding from this study that agistors presence on horse agistment properties on the day of the fire in 2003 was widespread. With over one thousand horses agisted currently on rural properties on the urban edge, there are potentially as many people who may head out to their horse in the event of fire in the future (given that families and friends often assist in the time of emergency). While many agistors who had information about the threat of fire, and who made the decision to act on it, successfully removed their horses, many were caught in the fire front.

The experience of one agistor being ridiculed for being overly cautious by evacuating early fits with the tendency of many (including authorities and some agistment managers themselves), not wanting to alarm or panic people. However, the reluctance to take steps to relocate ahead of time, even if this has to be repeatedly enacted on days of high fire danger, can be the cause of people facing extreme risk.

Agistors need to know and understand information about fire behaviour, the risks to themselves and their horse. But it is vital they know the plan their agistment centre has for bushfire. With this information they can create a plan for their own safety and for the welfare of their horse. It is vital the individual's plans are in line with the plan devised by the agistment manager and understand how they fit into the "big picture".

4.1.2 HORSE BEHAVIOUR IN THE FACE OF BUSH FIRE

The main lessons learnt from those who observed and managed horses in the Canberra firestorm and other recent fire events, are that horses either contained in groups or left in their own familiar territory are unlikely to panic. This was observed by many of those interviewed who experienced the fire and was also confirmed by the local veterinarian who visited many of the properties where horses were killed and injured.²⁹ During the fire front horses in large areas moved to bare ground around gates and troughs. They were also witnessed moving into the burnt out areas of their paddocks.

Horses taken into indoor arenas, stables or barns (32 at Freshford, 74 at Kerrabee and over 100 at Forest Park)³⁰ remained settled and calm for the period when the fire front passed. Importantly these areas were defended from ember attack by tankers or people using water from drums previously prepared . At Curtin and Yarralumla Territory Agistment paddocks horses were put into holding yards and survived with fires burning around the yards.³¹ At Illoura Territory Agistment paddocks 58 horses survived the fires after they were taken into a small holding paddock.

There were many stories of horses being put into unfamiliar but confined areas (underpasses, backyards and even a lounge room) and 'riding out' the fire without panic. However, based on the evidence gathered in this study, this would appear to be more luck than a reliable

²⁹ Ken Jacobs, 2003.

³⁰ McLean, J. 2003.

³¹ McLean 2003.

strategy as horses that are moved into unfamiliar areas, or who are in a large mob being caught by numerous excited people in the face of fire, are more likely to get stirred up and react by running in fear. Horses feel secure in their own herd, removing most of a herd and leaving a few is more likely to cause panic among those left. If a whole herd of horses is to be moved, one agistment group said that moving the 'leader' horse of that herd first helped the others when they were put into the paddock later. If a herd of horses is to be moved into a safer paddock, it is best to ensure they are familiar with the 'lay of the land' – and have resided in the paddock for periods prior to a fire event.

Several accounts were relayed of situations where fences were cut, either to facilitate horse movement or to allow access to firefighting vehicles. It is commonly thought that horses will move through cut fences but this is not borne out by experience. Horses in familiar paddocks still respect a fence whether intact or not. They are unlikely to see an open section of wire. Similarly there were many horses that continued to respect fence boundaries even though the fence posts were demolished by the fire and wires were on the ground.

Many people observed that horses exposed to the fire front tend to stand in a huddle, closer than usual, with heads down and rump to the fire. This compliments the evidence that horses suffer the worst injuries around the rump, between the legs, feet and faces and highlights their ability to act on their own natural instincts to survive. Unfortunately burnt eyes, nostrils, muzzles and feet warranted euthanasia for many horses. Burning of the coronet band can cause severe laminitis, and in many cases the hoof can split from the coronet band and can shear off. Smoke inhalation can cause delayed respiratory problems. In 2003 many horses had an initial post fire check but required closer monitoring over the following days to pick up latent problems . Immediate veterinary treatment is ideal, but early after the fires vets were hampered by roads being physically blocked or closed.

Gear that is left on horses that has any synthetic material (polyester or cotton/polyester blend rugs, fly veils, synthetic halters) can burn and in 2003 caused serious injury to many horses.

There are several excellent publications on preparation and planning for horses in bushfires, which include information on the post fire recovery phase .

In summary, horses have a natural instinct when it comes to bushfire and in many instances, when allowed to mob together in an open, low fuel or bare paddock free of any synthetic gear they stand a good chance of survival. Where it is possible to coordinate putting horses into a suitably built, well prepared and defended structure they are familiar with it is likely to enhance their survival.

³² ACT Government vet, Will Andrew, interview

³³ see Pearson 2007, www.nre.vic.au, Good 1993

4.2 BUSHFIRE PLANNING ON HORSE AGISTMENT CENTRES

4.2.1 THE PLAN

A comprehensive written plan that is circulated to all agistors and reviewed and updated was seen as vital by several managers. Several detailed plans were provided to the RFS as a resource for this study.

It was a common response that managers had a plan in the process of being written.

I have no written plan, it is very ad hoc, I am aware I probably should have one!

The managers' overall ideas about having a plan can be loosely divided into three categories: anti-planning, informal planning and formal written plans.

One of the reasons for planning was a confidence that fire was not a big risk at the particular property or that the brigade was located nearby. The following two managers ran stables with small acreage of day turn-out paddocks:

There is not a big fire risk here, all the stables are built of non-flammable materials

We are in a unique situation with the rural fire brigade at our doorstep...we have very good knowledge, unless someone lights something on the road. If one approached the horses are easily accessible, each horse has a stable and we have the facilities to fight fires in the stables, we could open all the gates and the horses would run it. We have taps in all the paddocks and we may irrigate the paddocks

(I have) no hugely proactive plan, it's a case of sit back and wait and see. A few people ...say "what's the plan?". I tell them I manage fuel, its under control. I've said to people, don't worry we've got water in the paddock

The above managers had not experienced fire on their property in 2003, although had previous experience of evacuating horses in the face of fire on the property or agistment centres they had managed. But confidence for many was boosted by good experiences in the past. Whilst experience can be an advantage in coordinating a successful response to a bushfire event, it can also create overconfidence. Bushfires differ markedly and require plans which encompass multiple backup options.

Trust in the Rural Fire Service being able to attend if a fire broke out was a common source of confidence in those who hadn't experienced fire. Those who had been through 2003 were aware that they cannot rely on having a tanker present.

In some situations, where more than one manager was interviewed, the level of confidence was very disparate. Also, it was clear in some situations that the managers were not 'on the same page', expressing conflicting ideas about a plan. For example one manager expressed evacuation as the preferred option and the other said the horses would all stay on the property.

One manager had a plan prior to 2003 but felt it was so different to what they imagined, he was ambivalent about the idea of a plan.

We had a plan but we never engaged it as it was so different. We expected a fire to come from arson on the nearby road, we didn't expect to have so much time to do things. We did preparation on the buildings (filled gutters with water for example)

While some didn't have a written plan they had obviously thought a great deal about preparation and how they would act in the event of fire and spelt these things out in detail, others were very straight forward principles:

Safety for people and evacuation of people and horses well in advance

On ACT agistment properties a dual layer of community needs are presented. As was expected, the finding from this study was that horse agistment managers felt the question as to whether or not to be present during a bushfire on their property was a simple decision: to prepare, stay and defend.

As rural landholders in the ACT most managers of horse agistment centres are supported by the ACT Farm FireWise Program which was seen by some as very useful for their planning. The farm visits conducted on a one to one basis on site for rural landholders provides the opportunity to have expert advice on preparing their property for the event of fire and making decisions with their families about whether to stay or go. However, as mentioned previously, Farm FireWise is not tailored to a rural enterprise that includes large numbers of agistors as well as their own stock. Additionally, those managers that are not also landholders, are not included in the program and rely on communication with the landholder regarding their responsibilities. Consequently a major way the Rural Fire Service can assist is to adapt Farm Firewise for this particular rural industry accounting for the agistor population.

4.2.2 PREPARE, STAY AND DEFEND OR GO EARLY

Literature available on bushfire safety specifically for horse owners such as the Department of Primary Industries publication "Horses and Bushfires" assumes horse owners are also property owner.³⁴ Both Farm FireWise and Horses and Bushfires are based upon the Prepare, Stay and Defend or Go Early³⁵ policy which tends to focus on single dwelling setting where the home is the focus of asset protection and acts as a defensible refuge for people during the fire front.³⁶ This emphasis on householders as focus for policy and procedure development was criticized in the recent Victorian Royal Commission: "... far less attention has been given to the needs of those who are not at home when bushfires threaten".³⁷

Moreover, the home as a refuge idea has been severely questioned following the Victorian bushfires, it appears nowhere is safe in some circumstances. In a study of the Wangary Fire in 2005, for rural dwellers the 'home as a refuge' was not the predominant concept. Sheds, cars and even open spaces were all seen as shelter.³⁸ As we have seen in this study, agistors were sheltering in cars, sheds, and underpasses.

³⁴ Pearson 2007

³⁵ AFAC 2001

³⁶ Indian 2008 p.54

³⁷ Victorian Bushfires Royal Commission Interim Report 2009, p. 206

Many factors determine the safety of a shelter, including nearby fuel hazards, wind direction and building materials. Many horse agistment centers have no refuge (e.g. Territory Agistment) or are inadequate eg. widespread paddocks with flammable sheds. In this situation agistors who go to their horse when fire threatens have little shelter to protect them. In 2003 many of these sheds and horse shelters blew away. However, in a small grass fire they may provide adequate shelter. Horse agistment centres that have centralized facilities with large metal arenas or community sheds that are cleared of all hazards surrounding them can provide an acceptable shelter from the fire front for horses and people, so long as they are actively protected from ember attack.

In this study the survival of agistors caught out in the open was often expressed as luck, but there was some forethought involved which was based on a level of knowledge. Those on one centre that had parked their cars in an open car park area in case the shelter burnt, and one who moved back and forward to put out burning tyres (a trick he learnt in bushfire training), were acting on varying levels of personal safety knowledge. Many of the agistment managers in this study expressed concern about the Rural Fire Service providing education or awareness training for agistors, as this may then place unrealistic expectations on agistment owners from their agistors. While fears abound about 'too little knowledge' many anecdotal and published stories tell of survival put down to a remembered piece of knowledge.³⁹ Perhaps we should not be so afraid to equip agistors with information of what options are available to them that may prevent injury or death, with reference to an agistment centres bushfire management plans.

Although several researchers note the role pets and livestock play in decisions to stay or go,⁴⁰ the extra dimension of needing to travel toward the fire front with the explicit motive of protecting or saving their horses is largely absent from view in the literature surveyed for this study.⁴¹ What is clear from this study is that agistors will continue to want to 'rescue' their horses by putting them on a float and leaving in the fire front. While only a small number were surveyed, the feeling was unanimous that they would wish to act if their horses were threatened by fire, unless they were completely confident their animals would be taken care of by the managers.

As it is well known, fleeing in the midst of a fire is fraught with danger and can expose those fleeing to high levels of radiant heat, loss of orientation due to poor visibility, traffic jams and fallen burnt vegetation. Many agistment managers supported the provision of education for agistors as well as welcoming them to assist in the event of fire. The Rural Fire Service could play a role in designing specifically targeted education to increase the bushfire awareness of this group in order to assist managers. If this is to be avoided the obvious answer is to impel all horse agistors to leave their horses where they are and accept their fate. This may be more palatable if managers can guarantee that they will take all practical measures to increase the likelihood that the horses will be safe. However, many managers do not have the resources to move horses at short notice into safe areas. While it is best practice to relocate

³⁸ Indian 2008 p54 citing Smith 2005

³⁹ See for example Hughes, G "How we cheated Flames of Death", in the 1009 Victorian Fires

⁴⁰ See Proudley 2008; Handmer ??

⁴¹ With the exception of Handmer ??

⁴² Victorian Bushfires Royal Commission Interim Report p. 177

the horses very early (for example on every total fire ban day) horses cannot be kept in eaten out paddocks for long periods of time as they require fodder to prevent colic and the land will degrade. It may be necessary to devise a specific education campaign which accepts agistors desire to go and move their horse, but also makes it clear they then need to secure their own safety. Given that relocation is a popular form of bushfire preparation for many agistors the Rural Fire Service could tailor the Stay or Go message to assist this population to remove both their horses and themselves, from danger. The Rural Fire Service was seen to be able to assist in successful relocation in three major ways: firstly, in coordinating relocation sites, secondly in coordinating with the police and ACT Government about road closures and thirdly in providing timely and detailed advice about the fire threat to rural landholders.

One of the particular features of the agistor population is that it is largely urban dwelling women, and often their children, not traditional rural landowners. In making a case for bushfire safety information specifically targeting women Goodman argues that research has shown gaps in fire knowledge and perception of risk among women in particular.⁴³ The number of women dying in fires, as a proportion of total bushfire deaths has increased over the past thirty years.⁴⁴ Several women agistors interviewed had extensive knowledge of their local bushfire risk and fire behaviour, had assisted on properties during the 2003 fires and some had developed a comprehensive plan for their horses and their own safety.⁴⁵ However many had very little information and acknowledged that they were at great risk because of this.

While some of the women agistors may have a history of rural life this is not a group that has traditionally been at the forefront in fighting fires. Indeed even many rural women have a history of 'fleeing' fire, often at the behest of a male householder, or leaving so as not to get in the way.⁴⁶ It is easy therefore to discount women as being physically or psychologically fit to assist in the response phase of fire. However, this study has shown that many women were assisting immediately prior and during the 2003 fire event.

Many agistment managers supported the provision of education for agistors as well as welcoming them to assist in the event of fire. The Rural Fire Service could play a role in designing specifically targeted education to increase the bushfire awareness of this group in order to assist managers.

4.2.3 PERCEPTION OF BUSHFIRE RISK

The role of risk perception in preparation for fire has been underlined by much work carried out by Rhodes.⁴⁷ Understanding the perception of risk⁴⁸ among this population is key to any education or awareness provided and warrants further research. As Proudley argues, we need to know more about why people act rather than just prescribing correct behaviours.⁴⁹ It has been shown that the less informed people are, the *less likely they are to believe a threat and see the significance of any danger*.⁵⁰ It is however, the responsibility of the rural

⁴³ Goodman 2010

⁴⁴ Goodman 2010

⁴⁵ For example the Illoura Paddock User's Group

⁴⁶ Indian 2008 p.54

⁴⁷ Rhodes

⁴⁸ Tarrant 2006

fire service to equip these people with the knowledge of bushfire behaviour in order to best manage the danger they may expose themselves to.

*The challenge for agencies is to encourage the community to acknowledge the risk and work with them to prepare them psychologically and physically to take appropriate action and then communicate timely and appropriate information and warnings during an emergency to those who need it.*⁵¹

4.2.4 BUSHFIRE PREVENTION

In response to the question of what went well in the 2003 fires the question was answered by some managers with reference to very advanced planning and preparation. The construction of a 'bushfire management zone' on one property at the design stage was seen to have paid off. On another, decades of bushfire focused hazard reduction was seen to have prevented the fire from encroaching not only onto their property but the nearby suburbs as well. A strictly adhered to regime of slashing, burning and grazing in a year round management of pasture and vegetation debris was seen as key to fire prevention.

Most managers spoke of annual hazard reduction exercises on their property, burning, slashing and grazing areas around assets. For many, who have properties that are a mixed grazing business, fire hazard reduction is an integral part of their property management. Some were critical of the lack of hazard reduction by the government in particular within key areas near their boundaries, such as roadsides. There was also criticism by some that rural landholders are actively prevented by the ACT government from doing hazard reduction burns on their properties.

Several property owners use other stock strategically to graze down high risk areas. There was a focus on surrounding vegetation with regard to hazard reduction, although some referred to the hazards of stored hay. Many of the stable blocks on properties are made from highly flammable materials, filled with straw or sawdust. None of the managers talked about hazard reduction within or around the stables as a precaution. Similarly, where agistors have their own stables and sheds hazard reduction in these areas is left up to the individual agistors and therefore ad hoc.

Dry manure is highly flammable and manure piles and manure in paddocks burnt for days after the fire in 2003. One manager noted that daily cleaning of manure in the paddock in 2003 had contributed to the welfare of her horses and would keep her horses in cleared paddocks during fire season.

4.2.5 MANAGING HORSES IN BUSHFIRE

The ability for managers to protect horses from death and injury in bushfire is tempered by the form of agistment provided on the agistment property. Managers have varied plans to protect horses including provision of low hazard paddocks and plans for moving the animals

⁴⁹ Proudley 2008

⁵⁰ AFAC 2009 p11.

⁵¹ AFAC 2009 p 3.

into defensible indoor spaces or bare yards. In preparing a plan managers need to be clear as to their responsibility for agisted horses in a fire. Agistment properties that are based on a principle of full owner care will differ from establishments which offer horse care services with regard to their responsibility in the event of a bushfire.

One major success in the 2003 bushfires was the movement of horses on properties to indoor areas to protect them from flames and radiant heat. But this was only feasible for centres that had indoor areas available to horses. For those who are broad acre, leaving horses in their familiar paddocks with room to move to bare areas, was also seen as a successful strategy. Many horses died in the fires and some deaths were attributed to being placed in paddocks that, although believed to be less hazardous (due to fuel levels) were not familiar to the horses and consequently they panicked.

A second major success in 2003 was the successful relocation of horses to various locations around Canberra from many of the agistment properties. However, late relocation was the cause of chaos, major human injury and some horse deaths. The timing of relocation is absolutely vital. One of the challenges facing agistment managers is when and how to stop relocation at a time when they are facing a fire front. But of course, judgments about timing are dependent on information about the progress and threat of fire.

4.2.6 TRIGGERS FOR ENACTING PLANS

In 2003 strong informal communication networks among rural landholders, particularly those who were members of local volunteer rural fire brigades provided the benefit of up to date information on the fire and it's likely path, led to relocations instigated or activated by property managers. The trigger for many agistors on these properties who successfully relocated was contact from the agistment managers, for others it was informal networks of friends. With a level of pre-planning the combination of the above might prove a powerful communication tool.

However, this experience was vastly different for other managers who were not aware of the risks of the fire encroaching. There were many messages from authorities that judged the fire as not being a threat to their properties. Comprehensive information about the threat of a fire that is burning in the vicinity was raised as vital by almost all the agistors and managers interviewed in this study who had experienced a bushfire fire. It enhanced their ability to instigate the phoning of agistors to relocate early.

4.2.7 LEADERSHIP AND MANAGEMENT

Provision of information about fire is not sufficient to enact a plan, clear decisions need to be made as to when to take appropriate action once information is provided or other triggers have been activated. A decisive leader was seen by both agistors and managers as essential in a time of crisis. It was noted by several managers that a clear chain of command helped in 2003 to fulfill plans without question or argument. This was backed up by several agistors who appreciated the calm leadership of managers acting in the face of emergency and designating roles and tasks. A well maintained contact list of such leaders would also provide the RFS with another tool for improving communication.

4.2.8 AGISTOR PRESENCE ON PROPERTIES UNDER THREAT OF FIRE

This study found very differing approaches to the presence of agistors on horse agistment properties in the face of fire. One approach can be loosely defined as a 'closed door' policy, the second is an acceptance at some level of the presence of agistors and the third is welcoming their presence and incorporating them into their plans with a clearly defined role. Agistor presence is strongly linked to the nature of the agistment business, the management style, and property layout. Some of the plans for horse safety, in the absence of staff to assist, are reliant on the labour of horse agistors to fulfill them.

Several managers interviewed were categorical that they wouldn't have anyone on the property; others would not want agistors protecting assets or doing any form of fire fighting.

Some people will recklessly and suicidally go to a fire, we should ban all people

However, it was found that several managers who espouse a closed door policy had agistors on their properties in the 2003 fire. It is very difficult to stop people coming to their horse making this option difficult to enforce.

The idea of having select people on the property to help with moving horses and doing some fire fighting activities, such as putting out embers around stables was seen as a way to use a motivated group of agistors, but prevent the chaos of too many people being present. One manager who had their property burnt said they would probably choose which agistors stayed to help next time, rather than having a complete 'open door' policy.

Others would leave it entirely to agistors to decide whether or not to be present:

People need to decide whether to be here themselves, they need to decide early and stick to it

Several managers emphasized that agistors' presence would only be accepted in order to manage their horse but not to engage in any fire fighting. Managers were split on the issue of having agistors assist beyond moving their own horses. This is to be expected and accepted and any amendments made to the Farm Fire Wise program by the RFS should be as flexible as possible to allow for this freedom of choice by managers.

We see the agistors as a resource. Having some trained resourceful people is potentially a huge asset for fire fighting – we can't count on the rural fire service for providing any...It is important to have specific check lists in the plan, you might have to act very quickly ...then you can give them a check list and say do this

Those who would rely on agistors themselves to move their own horses to safety include complexes such as the Territory agistment, comprising large broad acre paddocks with no built assets and no managers on site. On the Territory properties, agistors are encouraged to have their own plans with regard to managing their horses, plans made in consultation with management. In 2003 one group of agistors with horses on Territory Agistment paddocks successfully enacted their plan of relocating horses and then leaving the property.

While managers are unanimous in thinking that horse relocation would need to be carried out 'early', the challenge is defining a point at which agistors would be asked not to come onto the property to remove horses. Another challenge is successfully communicating this. Hampering movement of firefighting vehicles is an obvious reason for controlling vehicle movement on any property. With most properties having one access road this is a vital part of planning. On several properties having somewhere to lead horses to safety, rather than float or truck, was seen as the best option. However, human safety in this situation is difficult to ensure.

Liaison with the local rural volunteer fire brigade, including visits for familiarization or training days was seen as a useful action for managers. The Brigade Captains interviewed welcomed contact by managers. Knowledge of property layout, including muster points for people and animals is vital so firefighting teams can work effectively on a property in time of fire.

In response to what they would like to see in a plan for their agistment property, all the agistors said they would like a plan, which was communicated to them all ahead of time.

I have full confidence in the management but think it is incumbent on the horse agistment manager to sit us down and say this is what we would do

Those on properties that had a communicated plan said they would like it reviewed and to have a reminder in good time. They all said they would like a relocation plan to be part of any bushfire action plan. This would include relocation areas off the property being organized ahead of time and some form of communication between agistors and management.

CONCLUDING REMARKS

There was a small number of managers who thought a plan was of little or no use, and a substantial number who had an informal plan. For these two groups there was not a strong focus on the presence of agistors, they either had a 'closed door' or 'wait and see' approach. For some there was not a clear decision about providing a level of safety for the horses. Confidence that they could deal with a bushfire situation stemmed from either proximity to and links with the local rural volunteer bushfire brigade or from previous experience of fire. While not at the stage of having a written plan a number of these properties had some well thought out informal plans. Prevention, particularly in the form of hazard reduction, was a focus for this group. Those with a closed door approach had given thought to who would move horses if necessary.

A good number of agistment managers had committed their plan to paper and communicated this to agistors. As well as being a requirement of the ACT government for landholders, a written plan has multiple advantages. Firstly, it is much more likely to be comprehensive and cover many issues not commonly thought about; secondly it has the advantage of being able to be communicated and can then allow agistors to devise their own plan for themselves and their horse, which is in line with their agistment managers' wishes.

Centres are very diverse and a plan will reflect this. A centre that has widespread paddocks and small numbers of staff will not be able to bring horses into a central area, whilst small centralized centres with staff on hand can more easily manage the horses themselves and may be overcrowded with all agistors present. Centres with no manager on site will need

the agistors to have a comprehensive plan themselves. As such, the Farm FireWise program administered by the ACTRFS needs to encompass the diversity of practices within this sector.

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The following is a summary of the many elements of planning that were raised in interviews that already make up plans by horse agistment managers in the ACT. This detail should be used to inform any future amendments to the RFS Farm Fire Wise documentation.

Prevention

Risk – type of fire(s), bushfire behaviour, local terrain

Prevention of risk behaviour (e.g. smoking, driving cars on grass)

Hazard reduction activities prior to fire season (October-March, varies slightly per season)

Contacts – up to date contact list, horse numbers

Communication plan – phone trees, decision re use of centre phone line

Preparation

Dedicated bushfire ‘compound’ or refuge for people, ‘muster point’

Decision re presence of agistors/role

Personal safety, behaviour, gear

Horse safety plan (e.g. relocate, leave in paddock, bring in to yards or familiar low hazard paddock, bring in to arena, defense of buildings housing horses)

What to do if an agistor witnesses a fire outbreak first (contact plan)

Fire fighting equipment (training for those present)

Water sources

Fire information sources

Response

Command and roles

Limit to relocation activity – people coming or leaving property

Knowledge of people on property

Contingency plan (if buildings ignite, if caught in the open)

Ember control

Recovery (short term)

First Aid for people

First Aid for horses

Assessment of dangers

Water/feed for horses

5. CONCLUSION

This study has found that in 2003 agistors flocked to their horse agistment properties and engaged in a range of activities on the day of the fire. Many were on properties when the fire front engulfed the area, with little in the way of protection. Concern and planning for personal safety appeared at the time to be minimal. A greater appreciation of risk has resulted from the experience, but for many who have not experienced fire the risk remains of similar scenes being played out in the future. Agistors are keen to have a plan at their centre that is communicated to them ahead of time and regularly reviewed by management.

All the managers that were interviewed had many ideas about bushfire plans, planning appears to still be in gestation for many centres with ad hoc approaches to agistor safety and horse welfare in the event of fire. Some centres had very well developed plans that incorporated a clear role for agistors and included well thought out safety considerations for agistors.

There are differing approaches to the presence of agistors on horse agistment properties in the ACT in the event of fire. One can be loosely defined as a 'closed door' policy, the second is an acceptance at some level of the presence of agistors and the third is welcoming their presence and incorporating them into their plans with a clearly defined role. The study found that dimension of agistor safety, beyond espousing a closed door policy, was not always well-considered by several managers. Where there is no defensible refuge for people to shelter, agistors are at great risk of being caught out in the open.

All managers welcomed some level of information to help with developing their plans but had quite opposing views about the provision of education/awareness for the agistor population.

Bushfire planning on horse agistment centres must reflect the diverse forms of agistment businesses. All agistment managers need to respect the fact that horse owners in the ACT generally have high standards of horse care and wish their horses to be protected to some degree from the harm of bushfire.

Horse agistment managers need to face the fact that agistors may be present on their properties if threatened by bushfire, either because they happen to be there looking after their animal in the normal course of events, or because they specifically come to evacuate their horse or to move them to a safer place on the property.

Equally agistors need to accept that if they choose to keep their horses on pasture and in herds, a natural environment for a horse, they are vulnerable to bushfire. Some human effort can decrease the likelihood of horses being burnt or perishing in fire, but only with the infrastructure and resourcing to move horses and defend a refuge. Agistors of horses in broadacre paddocks that do not have prior warning may need to leave the horses with their natural instinct to cope in order to consider their own personal safety. It is the responsibility of agistors to put their safety ahead of their horses.

