Conference Proceedings – Speaker Transcript

Prescribed burning provides opportunities for site restoration via weed management in the Mount Lofty Ranges

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Link to slides

Thankyou, I work in the Mount Lofty Ranges in South Australia and essentially the role of our team is to plan, assess and deliver fuel reduction works in the Mount Lofty Ranges using prescribed burning as our number one tool. This image (slide 1) shows vegetation that is typical of the region. Most of the work we do is focused around fuel reduction to mitigate the risk of bushfire but we also do a lot of work and a lot of burning purely for the purpose of conservation. I'll give a brief example at the end of this presentation. Being so close to Adelaide all of our Parks are highly fragmented like this one (slide 2) and they've got a strong history of disturbance such as mining and grazing. You name it, they've had it and in this example the Park has a golf course.

Within our team we have a very strong focus on weed control and we do this routinely for all of our burns. There are two reasons we have such a focus on weed management. The first is we don't want to push the quality of the bush backwards and have a negative effect in already disturbed environments. The second is that we don't want weedy fuels to quickly accumulate in the areas that we're trying to manage. Our aim is to ensure that the vegetation condition does not deteriorate and fuels don't increase due to woody weeds. We don't want to simply go in, do a burn and leave. We never do that anymore and in many cases we're actually able to improve the sites.

This is a map of a typical 8 hectare burn site up against assets (slide 4). We'll map most of our burns on foot, assessing and looking for things like bush condition, weeds present, their distribution and their cover throughout the burn site. This way we can get a really good picture of what we've got to deal with pre-burn and post-burn. Our planning begins 6-18 months prior to give us plenty of time to carry out works that are often seasonally dependent.

This is an example of a site that is fairly intact in the scheme of things (slide 5). This shows the mapping we did pre-burn and then again four years post-burn, showing a significant reduction in the distribution of gorse (*Ulex europaeus)*. This shows how we've helped the bush out and in this particular site it can look after itself fairly well from now on.

The key point we'd like you to remember from this presentation is that weed control should be and is routine and needs to be thought about pre-burn (slide 6). In most of our situations pre-burn control greatly increases the efficiency of any post-burn work and overall makes our work easier. An example to highlight this point is shown here (slide 7) with *Erica arborea* (tree heath) control in an otherwise intact woodland in the Adelaide hills. Six months prior to burning we 'wacked' that stand of *Erica* to ensure all

of that biomass would burn during the burn. One of the benefits of this approach is this disturbance would then promote juveniles which would then be burnt and killed during burn. Also we wouldn't have the adults sitting up high and dropping seed onto burnt ground which often happens when burning under mild conditions such as those within prescription. The other benefits of this approach are that it also promotes native germination and makes follow up, post burn easier.

The last example is of a perched swamp in the Adelaide Hills (slide 8). The weed here *Callystachys lanceolata* (wonnich) is a Western Australia import and is dominating that perched swamp. It's very thick and because of the location of the site we were unable to burn the swamp at sufficient intensity to consume the *Callystachys.* So in this situation we burnt the surrounding area in spring in mild conditions within prescription. We later went back in autumn after we had dropped all of the *Callystachys lanceolata* on the ground and we burnt that swamp at a very high intensity and consumed all of the biomass that promoted mass-germination of the weed. We're then dealing with one age-class and we can go through and hand weed, spot spray, and re-burn areas to control the germination.

Burning can be a very useful tool for weed management and although no site is ever the same we have been able to use a variety of techniques for certain weeds which greatly increase our efficiency. Thankyou.