2015 Participants' Review of Yellomundee Firesticks A report for the National Parks & Wildlife Service

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Den Barber, Garry Blount, Ed Cameron, Dan Chalker, Douglas Clark, Wayne Cornish, Oliver Costello, Jeffrey Cottrell, Uncle Lex Dadd, Lachlan Garland, Paul Glass, Aunty Sharyn Halls, Keirilee James, Danny Lett, Vickii Lett, Ingrid Matthews, Glenn Meade, Peter Mobbs, Kirsty Reynolds, Chris Tobin, Jacinta Tobin, Jeremy Walker, Erin Wilkins; also children Jasper Tobin and Corey Barker.

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The project was facilitated by **Blue Mountains World Heritage Institute** - Project Facilitator Anne Fitzgerald, assisted by Nahid Sultana, with the institute's Program Director Dr Rosalie Chapple, and with assistance from the NPWS Project Steering Group.

Contact Glenn Meade at *Glenn.Meade@environment.nsw.gov.au* for information about the background to this report.

Contact details

To arrange permission to use any part of this document please contact:

Glenn Meade - Manager, NPWS Hawkesbury Area

Ph: 02 4758 2200

E-mail: Glenn.Meade@environment.nsw.gov.au

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TABLE OF CONTENTS

SECTION 1 - SUMMARY OF FINDINGS	6
Shaws Creek, Yellomundee	8
Condition of Country	8
Yellomundee Firesticks	9
Interconnected - Community and Country	9
Aboriginal Community Benefits of Cultural Burning	10
Collaboration and Participation in Cultural Burning	11
Cross-cultural Relationships	11
Growing the Knowledge Base	12
Potential Reach	13
The Future for Firesticks	13
Commitment	14
A. FOCUS ON COUNTRY	18
Condition of Shaws Creek area at Yellomundee	
Significance of Country at Shaws Creek and Yellomundee	18
B. CARING FOR COUNTRY	21
Will cultural burning improve country?	21
C . COMMUNITY AND CULTURE	25
Aboriginal Participants - Caring for Country	25
Aboriginal Participants - Benefits of Cultural Burning for Community	26
Non-Aboriginal Participants - Benefits of Yellomundee Firesticks to people	27
Aboriginal Participants: Extend benefits to other communities	28
Welcoming others to learn from Yellomundee Firesticks	29
Collaboration	30

D	KNOWLEDGE OF COUNTRY	. 32
	What helps you, or guides you, when you are working on country?	. 32
	What do you know about the plants and animals at Shaws Creek Aboriginal Place?	. 35
	All participants - Range of Species	. 36
	Who do you believe are the knowledge holders for plants and animals in this area?	. 37
	Why do you think this place was chosen for the cultural burning program?	. 39
	What do you know about the timing of the burns and the reasons for that timing?	. 40
	The way cultural burning is performed.	. 42
	Is more knowledge needed to restore country at Shaws Creek?	. 44
	Who or what do you rely on for information when working on country?	. 47
Ε.	VISION	. 49
	Is there one thing that is most important to you about this cultural practice?	. 51
F.	ACTION NEEDED	. 53
	What is needed to achieve this?	. 56

Section 1 SUMMARY OF FINDINGS

Shaws Creek, Yellomundee

Yellomundee lies within the traditional territory of the Darug people and is a place rich in Aboriginal cultural heritage¹. Its location and features support understanding of the site as an Aboriginal place of learning and living, and as a junction site for trading and ceremonial pathways along the Nepean river and through to the mountains. It joins the Blue Mountains and the Nepean river, and connects to the Cumberland Plains. It is described by a Darug elder as a *place of sacred waters*. A fresh water creek flows to the Nepean river, which features fish traps and a shallow river crossing adjacent to the site. The site is recorded to have hosted one of the last yam beds in the Sydney basin.

Shaws Creek at Yellomundee contains artifact scatters, and the precinct is rich in archeological evidence of habitation, some of which dates back 15 thousand years, including axe-grinding grooves, a significant handprint cave and possible burial sites².

The recent Aboriginal history of the site is also significant. It was named after Yarramundi, a senior cultural man (Kuradji) from the area at the time of settlement, from whom many of today's Darug community descend. The 2008 establishment of the Aboriginal bushcare group at the site, and the return of cultural burning in 2014, bring contemporary significance to the site. Aboriginal people continue to camp and engage in cultural learning at the site.

Shaws Creek is also a recreational site, used by groups engaging in mountain bike riding, horse riding, walking dogs, fishing and camping.

Condition of Country

The Shaws Creek area of Yellomundee is degraded and weed infested due to post-colonial land uses of mining and farming, and the continuing arrival of weeds via waterways. Remnant vegetation species, which represent a number of Endangered Ecological Communities (EEC's) which once dominated the Sydney basin area, are struggling to compete, or are out of balance in this landscape; Bell miner birds impact the eucalypts in the area.

The site hosts feral animals including pigs, foxes, horses and rabbits. Native fauna so far observed include kangaroos, various wallabies including swamp wallabies, possums, platypus, bush rats, and red crowned toadlets. Reptiles sighted include red belly and brown snakes, goannas, skinks, and dragons, including water dragons. Birdlife is dominated by Bellbirds. Sea eagles, magpies, currawong, pheasant coucals, wood ducks, quails, wrens and ibis are among those that have been sighted. The Management Plan which details the endangered ecological communities notes the presence of few individual endangered species on site. The bushcare and cultural burning activities on this site aim to support the regeneration and functional recovery of these EEC's. The area also represents the heritage of European farming which has occurred there.

¹ Aboriginal Place Declaration 30 June 2014 p 2446 www.gazette.legislation.nsw.gov.au/so/download.w3p?id=Gazette 2014 2014-59.pdf

² A Darug participant is aware that some believe Yellomundee to be buried there, and referred to a 'death rock' on site.

Yellomundee Firesticks

Since 2014 the Yellomundee Firesticks program has been working with the local Aboriginal bushcare group, and other local groups and individuals³ in an effort to restore the country at Shaws Creek. The bushcare weeding and poisoning regime, which has been occurring since 2008, is being augmented by Firesticks cultural burning, assisting in the removal of weed biomass and in the regeneration of native species.

Cultural burning is a practice which is embedded within relationships to country and community. The Yellomundee Firesticks project is using cultural burning in a modern regulatory environment, and on a mainly exotic landscape. This is viewed by participants as an experiment with deep, and potentially far reaching, implications for people and culture.

Cultural burning to date has been limited by the need to coincide the natural conditions and the organisational schedule. In terms of its impact on vegetation to date, Firesticks has been observed to have assisted in some reduction of weed biomass, and has precipitated the regeneration of some native grasses and plant species not previously observed on the site. In some locations on the site the burning has had temporary positive impact, with weeds observed returning in cleared areas. African lovegrass responds positively to fire, and further research and observation is required in order to attempt to schedule burns to its detriment.

Extended practice and further observation and study are needed to both understand the ecological impact on the site, and to increase the positive impact of cultural burning (along with other management practices) in supporting preferred vegetation and fauna communities at the site⁴.

Interconnected - Community and Country

Firesticks participants observe that the environmental benefits of the project are enhanced by its multifaceted human interface, citing: gradual progress towards remediation of relationships between Aboriginal community and government agencies; relationship building between agencies and community groups, and between Aboriginal and non-indigenous people (who develop increased understanding of, and respect for, Aboriginal culture); positive engagement for non-Aboriginal people in repairing the damage done to Aboriginal Australia; and intra-familial, intra-cultural, cross-cultural and cross-generational learning and sharing around care for country.

³ The project is auspiced by National Parks & Wildlife Service (NSW) and funded by the Greater Sydney Local Land Services and NSW Environment Trust. It is a collaboration of these organisations with:

Darug People as the Traditional Custodians of Country;

Merana Aboriginal Community Association;

Mura Mittigar Aboriginal Culture and Education Centre;

Yellomundee Aboriginal Bushcare;

Other Aboriginal people and organisations;

Non Aboriginal people;

Willow Warriors;

Bass Fisho's.

⁴ Indented, **bold** text is used to highlight **action points**.

These short-term benefits of the program prime the Firesticks community for the long-term commitment needed to have lasting impact on the ecological communities at Yellomundee. This human dimension of Firesticks places cultural burning at the centre of the range of activities needed to restore and care for country at Yellomundee. Firesticks has brought new energy to the work of bushcare at the site, and has empowered and enabled cultural practitioners to exercise their authority and responsibility for country. These benefits are reported by traditional owners, as well as other Aboriginal people now engaged in caring for Yellomundee.

Beyond its apparent benefits to Aboriginal people, it has the capacity to enhance commitment to conservation at a broader, society level as it builds people's understanding and recognition of the needs of our native bush areas.

Aboriginal Community Benefits of Cultural Burning

The land tended by the Yellomundee Firesticks project has become a place of increasing contemporary significance to the Aboriginal people involved. Since colonisation their people's authority to exercise their traditional responsibility - to care for country - has been denied. Cultural burning practice was prevented by dispossession and threat of punishment. Fire is integral to Aboriginal culture and its return as part of cultural practice is important to the health of individuals and community. Aboriginal law significantly concerns the use and sharing of fire, and it is central to the cultural practices of sharing stories and learning culture.

Firesticks participants consider the project is not only important for those directly engaging, but for their culture and communities, as it represents the beginning of a process of reconnection with country, and of relearning how to care for country today. This includes overcoming new challenges of managing relationships with exotic species, as well as gaps in traditional knowledge relating to the site.

Increasing engagement at the site for more people from the Darug and other Aboriginal communities is important to participants. Cultural knowledge can thus be shared from Yellomundee in the same way as it has returned to Yellomundee.

To ensure cultural protocols and best practice drive its growth, and to build the resilience of Yellomundee Firesticks as its impact broadens, participants see the need to build stronger foundations. These include

- greater experience and knowledge of traditional burning, its impact and adaptations
 (along with a range of bushcare techniques) to restore a degraded landscape;
- exercising culture and cultural authority in modern Australia; and
- the development of firm and positive collaborative relationships with agencies, groups and individuals involved with Firesticks at Yellomundee.

Collaboration and Participation in Cultural Burning.

Cultural burning is a specific practice. It exists within cultural protocols, and these underpin sharing of this cultural practice at Shaws Creek. Cultural burning is guided by values, objectives and burn plans, and those with the cultural authority to exercise this responsibility lead the practice.

There is merit in collaboration between traditional custodians and other Aboriginal people, and the NPWS, RFS, local regenerators and other agencies and community groups. This increases the available ideas, capabilities, knowledge and expertise and brings access to a wider range of resources. A diversity of views assists in considering the range of ways contemporary communities engage with country, which may assist in developing resilient models for caring for country in modern Australia.

Traditional custodians request an open dialogue between stakeholders, and respect for their self-determination at Yellomundee. For Aboriginal people involved, the process of relearning and reconnecting with this cultural practice cannot be rushed.

The traditional owners, and other participants, hope for continuing, respectful sharing of knowledge as the project develops, engaging people with traditional knowledge from other places, and working in respectful relationship with agencies, scientists and researchers from a range of disciplines.

The observance of cultural protocols is necessary for the project to continue in cultural safety: to protect custodianship of country; and to prevent appropriation of culture, which can occur where there is not sufficient understanding of, or regard for, traditional culture and law.

Cross-cultural Relationships

Participants acknowledge the consistent effort of the people engaged in bushcare and regeneration at Shaws Creek over many years. Extraordinary effort of many people and organisations has brought about the commencement of the Firesticks program at Yellomundee: the work of traditional custodians and cultural advisors over many years; the effort and commitment of National Parks & Wildlife staff - the rangers, with the support of the Area Manager; the assistance of funding from Greater Sydney Local Land Services; and support from partner organisations and community groups and individuals.

Traditional owners look forward to a process for clarification of the roles and responsibilities inherent in the declaration of Shaws Creek as an Aboriginal Place, and to consolidation of their cultural authority, and that of other Aboriginal cultural practitioners. This is important as stakeholders collaborate to consider the sustainability of, and build the resilience of, the Yellomundee Firesticks project.

Aboriginal people's experience within the dominant culture has left a legacy of mistrust. For this cross-cultural project to continue for the long term (a requirement for significant ecological impact) ongoing vigilance will be required to build upon the trust and relationships which have formed.

Firm foundations and long term commitment are needed for the project to reach its potential: to substantially enhance ecology both at Yellomundee and ultimately in connection with other places; and to benefit those involved and the wider community as it grows to educate and engage more people and places in cultural practice over time.

Growing the Knowledge Base

In guiding the reintroduction of cultural burning at Yellomundee Aboriginal participants have been listening to country, observing, and bringing knowledge from other places. Within its first year the program has engaged interested groups, and begun to negotiate the range of challenges of permits, timing around weather, fire restrictions, bushcare and the untested landscape.

Many people have brought knowledge of the site and its ecology to the Firesticks program. Participants rely on a range of people for information about the species and their relationships. They welcome knowledge and experience shared by Aboriginal participants. Many rely on the National Parks rangers, who also bring cultural knowledge. Most depend upon local bushcarers for species identification, particularly those with decades of experience on the site. Amongst these are people with environmental science expertise, who welcome this unique opportunity to explore and apply this in the cultural burning context.

Participants foresee further planning, practice, monitoring and reflection in order for Firesticks to consolidate and enhance its positive impact on country at Yellomundee. Observation of the impact of burns, and 'listening to country', are the slow and necessary drivers of this process. To assist in this, participants have identified the need for

- consensus and clarification of the intent of burning (and the companion practices) without which burning plans and monitoring can seem haphazard;
- further species identification both of what is on the site and species historically present;
- unbiased ways of monitoring and measuring progress of cultural burning;
- resources to enable augmentation of regeneration by planting.

Participants have identified the need for resources to enable them to gather together periodically, and for sufficient time, to deepen knowledge exchange and common intent. Getting the conditions right to enable cultural sharing without exploitation was considered important for the long term resilience of the project. They want to see appropriate acknowledgement and remuneration for those who bring the cultural knowledge and education. Resources are needed to enable attendance at cultural learning workshops and conferences.

In order to continue to build knowledge - during cultural burning days, workshops and 'on country' learning events - participants welcome cultural advisors and other people with required knowledge (such as environmental and biological sciences, anthropological and archeological knowledge). Observing appropriate cultural protocols, participants welcome the assistance of others with expertise across disciplines.

The cross-cultural nature of such knowledge sharing exposes cultural knowledge, enmeshed as it is with relationship and responsibility to country, to appropriation and disengagement from its cultural context. Aboriginal participants require negotiation to maintain cultural safety in any collaboration with educational or research bodies, whilst welcoming knowledge sharing in the spirit of caring for country and growing the contemporary relationship for a healthier country and healthier people.

Potential Reach

Aboriginal culture understands and respects the interconnectedness of people, culture, cultural heritage and environment. Connection between people and with country is considered the most important feature of the program by most participants. However several note that this approach can challenge the approach and understanding of the dominant culture, which oversees management of public lands.

Into the future, Firesticks participants envisage greater integration of cultural burning knowledge and practice with mainstream fire service practice over time. They regard the Firesticks project as an important step in moving beyond the conventional 'demonising' of fire, to an understanding of its service in landscape management, wildfire prevention and in supporting flora, fauna, people and culture.

In the shorter term the environmental impact of hazard reduction practices could be improved with greater regard for cultural burning principles and practice. Beyond this, the human dimension of cultural burning, and it's concentration on the nexus between people and environment - healthy country, healthy people - is seen to have profound implications for people's relationship with country and with Aboriginal culture.

Building a pathway toward mainstream legitimation of cultural burning requires support for those with cultural authority, Aboriginal people, who may wish to undertake the training necessary to engage with, and advance within, fire management services in Australia.

The Future for Firesticks

Participants foresee a renewed ecological and cultural landscape at Yellomundee. They see healthier relationships, between plant, animal and human communities, and see the traditional owners and Aboriginal cultural practitioners taking leadership in redefining the critical human role in caring for country, which is now severely impacted.

They describe Yellomundee as a place where Aboriginal people will come to learn culture, and where Aboriginal and non-Aboriginal people will find an example of how we can heal country, exchanging knowledge and culture through story, song, dance and 'simply being there'.

Firesticks is described as a program with no end. Participants urge the development of the necessary cross-cultural framework, plans, strategy and resourcing to enable the program to continue. Some steps are already in place or are being trialled. Others require the support and commitment of the agencies, groups and other participants and leaders to progress further.

Priorities identified include

- 1. The development of a Plan of Management for the Aboriginal Place with the Darug people as traditional owners; this will assist in bringing more traditional owners into relationship with the program, which is an objective of the Darug participants.
- The development of a framework which takes into account the cross cultural nature of the project, cultural leadership and protocols, sharing of knowledge with cultural safety, and appropriate cross-cultural systems for valuing and remunerating work and sharing of knowledge (cultural education);
- 3. Discussions and decisions on intent: the site currently has is a diverse range of uses. Traditional uses of the site are compatible with some of these. Clarification and decisions

on the future uses of the site, and the way these will be managed, assists in creating the land management and cultural burning plans needed to lead, collaborate and coordinate bushcare and cultural burning practices, and measure impact with accuracy.

Time on country and 'an open dialogue' are favoured ways of discussing and resolving questions of intent. Participants urged that the time be taken that is needed, especially whilst relearning cultural practice. Traditional practice supports learning from all sources and listening to country, then 'feeling what is right'. Today that practice will bring together cultural knowledge with knowledge from a range of 'disciplines' (by which academic-based knowledge systems organise understanding of dimensions of the place, eg, ecology, land management, anthropology, archaeology, geography). It will take time and care to integrate traditional knowledge and practice with the range of specialisations that could assist in understanding and restoring country at Yellomundee.

- 4. The development of strategies for proceeding to fulfil intent over time. These need to be responsive to a range of factors feedback from country, weather, bushcare schedules, observation of impact, policies and regulations and resourcing etc. These strategies also will help to guide burn planning, and leadership on the day.
- 5. Resources and support have been forthcoming to enable the program to succeed in its first year. Participants call for this commitment to continue and to grow. Additional funding and support are needed to engage with the range of people and communities and to facilitate the program's development.
- 6. Opportunities to integrate policies and provide training and employment for Aboriginal participants within land and fire management authorities will be necessary for these services to benefit from cultural practices.
- 7. The Darug traditional owners want the site to be made more secure out of respect for its significance to the traditional owners and other Aboriginal people. Coming on the site is coming onto a culturally significant place and this needs to be understood. The traditional owners continue to see Yellomundee as a place of cultural learning and sharing. They see the project as bringing more energy into this role for Yellomundee for the traditional owners, for the Aboriginal community, and for the wider community.

Commitment

The Yellomundee Firesticks program uses traditional Aboriginal land management techniques along with contemporary bushcare techniques to restore ecological health and balance to a significant and degraded landscape.

Cultural burning is a growth and weather-dependent practice, and it occurs in a national park which is visited occasionally for this purpose.

The project involves collaboration between Aboriginal groups, bush care groups, and other community groups, regenerators, researchers and land management experts, the National Parks and Wildlife Service, Rural Fire Service and a range of others.

It operates within the existing policy and regulation frameworks designed to accommodate culturally foreign knowledge systems, and fire management regimes designed to protect life and assets in a modern context, rather than support the health and ecology of native species.

The Yellomundee Firesticks program is undertaking important and difficult work in a challenging context. The continuing efforts of workers in the collaborating organisations to help the project in this, and to help make it easier, is appreciated by participants. Increased organisational commitment will assist the project to meet its objectives, as obstacles are encountered and negotiated. The outcome of this effort will reward country and people.

Section 2

SUMMARY OF PARTICIPANTS' INPUT TO THE REVIEW

Fourteen of the 23 adult participants in this review of the Yellomundee Firesticks program are Aboriginal people, including four Darug people.

Words in *italics* throughout this section are quotations extracted from participants' comments in response to the prompt questions, which were recorded and transcribed, or are extracts from their written questionnaires (identical questions). For information about the background and methodology used in this review contact Glenn Meade at *Glenn.Meade@environment.nsw.gov.au*.

A. FOCUS ON COUNTRY

Condition of Shaws Creek area at Yellomundee

"We've got a lifetime of work with the weeds; in a flood plain, even when we clean that area we'll still be pulling out weeds that come down from right up to Goulburn" (Darug participant).

Participants unanimously concur that the area is degraded and weed infested, with most noting this as due to recent (postcolonial) land uses of mining and farming. *Some remnant species* were noted but these are competing in a landscape where *native species are struggling and exotics are taking over*.

- Several participants note that the site is affected by weeds arriving via waterways, noting that this will be an ongoing source of weeds.
- Many referred to the preponderance of feral animals. The site is considered *out of balance*, with a problematic number of (native) Bell miner birds impacting the eucalypts in the area.
- One participant understood that planning management for the site noted *few endangered plant* species and animals; another refers to many endangered ecological communities at the site.
- Several noted that this is understood to have been one of the last yam beds in the Sydney basin'.

Several participants (those with a longer association with the site) noted that the condition of the site is improving (we're winning), with one noting this occurred more quickly than expected soon after a big lantana clearing, as evidenced by natives regenerating. Bush rat sightings were also attributed to the improvement.

When asked to consider condition of country at Shaws Creek some responses reached beyond land and environment. One considered the health of the country including cultural heritage impacted by the displacement of traditional owners and by relationships with government. In this context the Yellomundee project was considered to be healing country in that:

'you're seeing good relationships between community members, coming together to work, National Parks and other agencies, community groups and bushcare ...a lot of good things coming - it's sort of sick country but its healing and getting better' (long-term, non-Aboriginal participant).

Significance of Country at Shaws Creek and Yellomundee

Participants cited the Aboriginal significance as the first, or single, significance of the site (with one exception). Several considered it a matter for the Darug to answer, or acknowledged that their responses were informed by knowledge shared by the Darug.

Several respondents who acknowledged this as a Darug place went on to mention the growing significance of the place to themselves as people, as *Aboriginal people* or as *local Aboriginal* people. Several mentioned that through working with the place they have become connected to it and want to

continue to work with it, to see it become healthy. One referred to the site as *significant and sacred*. Several say this as a continuing significance.

This is a place for Aboriginal people and communities to come together to identify with their culture. After years of caring for the area you develop a strong connection in ensuring the area is cared for and maintained (Aboriginal participant).

Two participants stated that there are threatened ecological communities at Shaws Creek. Several participants noted the need to attempt to restore the area and to *bring back the balance*.

One participant did not refer to the Aboriginal heritage of the site when reflecting upon its significance, seeing it as a people's place with environmental value, and noting the flora as representing some of the vegetation communities - now remnant bush lands - that existed in the city metropolitan area, which has largely been cleared in the past... vegetation that once dominated that entire basin area. The old farm was a remnant of European history in area.

A People's Place

The same participant sees Shaws Creek as a natural, outdoor place that people can enjoy, which is very close to a large population center ...(and is) being used by a whole lot of different people.

Several Aboriginal participants also noted the significance of Shaws Creek as a people's place -

The beauty of it is that it has always been a place where people come together and talk and share and trade ideas.

It's become a really great community interface between the Aboriginal community, the bike riders, you've got bushcare, you've got willow warriors - you've got all these social, cultural and so on interactions.

Several participants noted a shift in understanding of the significance of the site. One said the significance of the site for him was initially a good place to access the river for fishing, but that he now considered that its major significance, that it's a place where Aboriginal people can come and probably celebrate their heritage and their culture there.

A Landscape for living and exchange

In explaining the Aboriginal significance of the Yellomundee area, many participants cited features which support understanding of the site as a meeting place and living place, such as fresh water, the shallow river crossing and a previous island (believed to have been sand mined); *It's on a river and on a creek; it joins the Blue Mountains back to the river and on to the Cumberland Plains... a resource rich environment.* As such, it is referred to by several participants to have been a meeting place and a place for cultural exchange and trade.

The area is rich in archeological evidence of habitation and a junction site for transport and trading routes and ceremonial routes along the river and up and down the mountains.

One Aboriginal person referred to the place as a *tool-making workshop and a point of trade*, another stated that *it would have been a part of an important pathway*. One Darug participant is aware of a track to the Blue Mountains from the Hawkesbury Heights lookout. Two participants referred to yams at the site: *this is the site of one of the last yam beds in the Sydney basin*.

Aboriginal Living Artifacts

Participants cited numerous features of Aboriginal living including artifact scatters:

One of the most significant I have seen (Darug participant)

It's hard to avoid damaging artifacts - (non-Aboriginal bushcarer)

as well as axe grinding grooves. It includes sites which have been archaeologically dated *-fifteen thousand years of living* - on the site and across the road; and significant carvings across the road - their omission from the Aboriginal Place classification was queried.

Darug participants provided additional insights into the significance of the site - one Darug participant is aware that some believe Yarramundi to be buried there. One Darug participant referred to a 'death rock' and another to *grave mounds* on the site. Darug participants referred to a men's /boys handprint cave that needs looking after as it was damaged with spray paint and anyone can access.

The waters on the site were described as *sacred waters*, and an important feature of the site as a living place - from the fresh water creek for drinking and *supporting the production of food*, to the river for swimming and fishing and where fish traps are still evident.

Darug participants consider that the significance of the site warrants respect. Presently anyone can access it without regard for its cultural heritage. Specific concerns included the need for greater care of the rock shelter; and reduction of the impact from mountain bikes and dogs. TransGrid land management methods appear to be damaging, or not respecting, the site: they appear to keep bulldozing all the trees over into the rock shelter. They might not even be aware.

Colonial and Postcolonial Significance

Significant events in the more recent Aboriginal history of the site were pointed out participants:

- The place was named after Yarramundi, a senior Aboriginal man a Kuradji (special or clever person with important cultural and spiritual knowledge and skill). Yarramundi was the father of Maria Locke from whom many of today's Darug community descend. He is recorded in a colonial diary (Tench) to have encountered Governor Arthur Philip in 1791.
- Across the river from Shaws Creek was a burial site: We were approached by one of the drivers who worked for Blue Mountains Gravel who told us a story of how a body was uncovered in bark there. And as they do, they threw it in the river because you don't want to find anything that's going to hold up not that anything stops it, but it might hold up their works for a while'.
- In its very recent history it's been declared an Aboriginal Place which means NPWS, OEH and the Aboriginal community all see it as a culturally significant as well.
- Several participants stated that Firesticks brings contemporary significance to the site.

It's where the Aboriginal Bushcare has begun, and we are starting to bring fire management back into practice and that is what makes it a hugely, hugely culturally significant area in contemporary times. (Darug participant).

interaction between other groups, building relationships around shared ways of managing that land and using that land... makes it a significant place. (Aboriginal participant)

B. CARING FOR COUNTRY

Will cultural burning improve country?

Participants almost unanimously concur that cultural burning will or should improve the condition of country, and all considered this to be one of a range of measures needed to restore the degraded country at Shaws Creek. Several emphasised the importance that cultural burning plays in bringing people onto country, and that this human component is also significant in the long term effectiveness of burning country.

People talk a lot about this cultural burning and they'll focus on environmental outcomes. For me the short term outcomes are about people. They're about people getting motivated, and people being empowered. When we talk about environmental outcomes we're talking about generations. We're talking about 5, 10, 20, 30 years of management when you actually really start seeing the benefits.

Two participants referred to the country as having been traditionally 'more open'.

Victor, who came down from Cape York to teach us, looked at one of the sites and he was looking through all of the undergrowth and he said this should all be clear.

These areas would have always been burnt in a sort of traditional way like to attract wallabies and game and stuff. So we've burnt areas so that it encourages grasses to grow so that then wallabies would come in and then lots of people would have a food source

Participants explained the way that they understand cultural burning will work, along with other methods of clearing weeds, typically:

The idea is to burn the country to reduce the density of weeds and then that would allow bush care activities, with chemicals or with hand tools, to go in there and remove more of the weeds to encourage the regeneration of natural plants. Idea is that cultural burning will replace weeds with natural plants.

It was also noted that some native species respond positively to the heat and smoke of the 'cool' cultural burns.

Some participants, including a number of long term bushcarers, are already convinced of the positive impact of cultural burning on country at Yellomundee to date, *e.g.*

The most amazing thing is how quickly you can see the changes... once people point out the tiny incremental changes, then you can see them all the time.

There are dramatic changes in some areas. I think it's great the changes are really good - it is opening it right up to the way it should be.

I just thought it was going to be mission impossible to get rid of the love grass. But looking at how the burn is working, and the fact that it lets light into the other grasses, I can see it is going to be part of that process of regenerating the bush.

I remember ... getting very excited seeing a species come out that wasn't presenting itself before... even the clearing that's involved with the fire - it's just knocking down the vegetation - it's closer to what it should be ... and we do that with fire.

Where there was once just lantana or lovegrass, there are now some native plants and seedlings popping up amongst the burnt patches.

Just looking at how quick the natives recover or re-establish I think burning is the only way to go. But then it also needs a lot of follow-up work after those burns.

The latter participant pointed out that the same impact is not being seen in all the locations burned:

I just looked at an area down the bottom there and the lovegrass has started to re-sprout already. It's only been a month but no obvious sign of natives coming up just yet.

Some participants noted the need to monitor and adjust cultural burning regimes and all noted that this will occur along with other bushcare methods (weeding and poisoning).

At Yellomundee we can go through and burn a patch, or you disturb a patch of ground, and all of a sudden you get a massive influx of new weeds that you've never seen. But given time, and as part of (weed management), it would be good.

There are of course other weeds that are taking advantage of the open ground and light. I believe that follow up cultural burns administered regularly, in line with available fuel loads and the right time of year, will allow the native species to flourish in time.

It's very early days so it's hard to tell what method beyond the burning we need to think about, and so it is important for me to be able be fairly resilient about how we carry out the burning and what steps we take after that. So keep an open mind about those things.

Several participants raised the challenge of managing fire-loving African lovegrass, with one stating that cultural burning

'is probably going to help in some aspects, and other aspects like the African love grass - I don't think that's going to help at all. It's an interesting concept that I want to see'.

We've got our problems down there like with the African lovegrass, which loves fire as well. We hope to be able to work out the burn rates to be able to do it around the lovegrass seeding times. (Darug Participant)

The need for more 'interpretation' and learning about the species on site was raised by two participants. One recommended that

'we take it up a level with more study - bring in cameras after burning, get more training for people, especially my people, bring in more specialist areas and make it more professional. (Darug participant)

A long term, non-Aboriginal researcher believes the country should respond, but the project needs

interpretation of the plant communities and the species that are found in those communities to determine how that Firesticks program should be implemented in order to get regeneration and a healthy eco system.

(Further explored in the later section Is More Knowledge Needed?).

It was noted that cultural burning *brings interest to a place and energies from people*. This was often mentioned in the context of the need for learning to manage this 'new' landscape.

It's an opportunity to get people to look at some problems, come together and talk about what the country may need. If cultural burning builds up people's understanding and recognition of the needs of our native bush areas, and encourages more people to come (on) country and learn, maybe the activity won't just support the plants and animals at that location. It could support their commitment to conservation at a broader level, a more society sort of level.

Doing cultural burns is a perfect way to get people involved. It is amazing to see just how many volunteers will turn up on a day when burning is done compared to straight weeding! The days are very inclusive, listening to the talks, smoking ceremonies, seeing the changes in the burn plots; they are all important.

To be honest if we get Aboriginal people back on country then that will always improve ountry because it improves connection.

It's about people coming together and learning how... re-learning some things and also adapting that knowledge for the new conditions (of) ecological threats and climate change.

Many participants noted that it will take a very long time to turn country around and maintain improvements, requiring movement in the 'whole ecology' of a new landscape, with people who are new to the processes - so it's an evolving space.

Over time, once people work out their roles and responsibilities, and can equally support the role and responsibilities of those plants, (and can) help manage the relationships between species - over time the cultural burning will be important..

It is not going to be an instant fix by burning it. My old man used to have a saying when he was an avid gardener and a good one: 'one year's seeding is seven years weeding'. You let a weed go to seed and drop its seed - and you've got another seven years of seeds, you know?

You can see benefits of burning grass in a year or two: healthier grass systems and so on. But over time that's when you see the landscape benefits because you start seeing the health of other systems, population bases of animals which take sometimes years and years and years of flood and drought and fire to build resilience. So in the short term you start getting those outcomes that get people motivated. And in the long term you see the environmental benefits which we need to monitor for years, you know, so we can really say 'that's having a positive effect at a holistic scale'. We'll generally be focusing on a small area or a couple of species, so we might get good indicators there. But then, over time, other things might be happening that we aren't aware of and we'll have to start addressing those. So I guess there's a more complex process there.

Range of land management techniques

Participants all considered cultural burning as an important part of a range of activities required to manage the degraded bush at Shaws Creek and promote the health of country (which many see also improves the health of people). Hand weeding and poisoning weeds were among the other activities referred to, and were seen to be a likely ongoing part of the care regime for the area.

The human dimension of the ecology of the site placed cultural burning at the centre of the range of activities needed by country at Yellomundee.

I actually think (cultural burning) becomes quite central to what we're doing and a guide to what we're doing there. I think burning is a very important part of it. ... it's a human being's job - we're managers of fire. ...it's good for the country and it's good for us.

Country needs its people as people need Country.

When considering the techniques for caring for country some participants noted that apart from burning and weeding, the cultural and educational role of Firesticks is an important and integral part of the process.

Protocols for participation in cultural burning.

Throughout the survey, several participants commented on the matter of non-Aboriginal people engaging in burning. Some non-Aboriginal people indicated that they do not intend to burn, but to undertake weeding to support cultural burning.

What I'm hoping to do is not actually be involved in the cultural burns but just to be involved in the weeding so that they can focus on the burn.

Aboriginal participants (in answer to another question) explained the cultural protocol.

... I am not Darug. I wouldn't burn at Yellomundee unless I was asked by a Darug person, which has happened. I would do bushcare, but not cultural burning without being asked.

Aboriginal people have set values, set objectives, set burn plans. They're involved in putting the burn in at some level - they might not be lighting the fire but they must be involved at some level : even handing over that authority for someone else to do it, or doing it themselves - and they follow some protocols around respecting country, following through with obligations and rights and responsibilities. And then implementing the most appropriate technique.

An Aboriginal participant saw that roles *could* be divided, so that non-Aboriginal people dealt with the invasive species using poisons and weeding, and the Aboriginal people used fire to regenerate. However he felt that it was important to be working together with *all those people who have worked so hard and for so long at Yellomundee*.

Another urged respect for culture: he was aware of people attending cultural burning workshops and using the techniques learnt without acknowledgement or engagement with local or other Aboriginal people - their knowledge and relationship to country.

Correct use of the term 'cultural burning'

One participant is aware of misuse of the term 'cultural burning' within organisations in other areas. It appeared to be used as a catch all term for any fire lit by an Aboriginal person:

In other areas at present there appears to be confusion about traditional burning. Need to understand and distinguish between the range of fire and burning practiced in Aboriginal culture, and other fire in Australia today. They need to differentiate: cultural engagement (around fire) is not necessarily all fires burned by Aboriginal people - there is more to it: what type of burning is needed and being done at any point in time? Like cooking, gathering, clearing up, managing country... To add up the number of call-outs to fires involving Aboriginal community members is not understanding or engaging with traditional burning. All fires are not the same.

C COMMUNITY AND CULTURE

Aboriginal Participants - Caring for Country

Aboriginal participants explained why healing country is important.

For ancestors, for culture, bringing community together and for younger people - to bring out, see country, learn from older people what they should or should not be doing on country.

It's important for everyone that country is repaired. It's damaged - it's not ok for it to remain damaged or get worse. This is what we've got to do - we've got to clean up... And I know with myself I take my responsibilities a bit seriously.

Several explained that healing country where you live is important:

Whilst it may not be my country, I feel an overwhelming need to contribute toward helping to heal this place as I would if I had the opportunity to work on my own country.

Many explained the connection between healing country and healing people.

It sort of heals something within ourselves but also the country as well, so it is both social and environmental and I believe it is all of us.

... if that country repairs, and becomes more resilient, I think that will help the Aboriginal community as well. It is an overarching, interlocking concept.

It's my mother. We don't own her. She sustains us. We only get the chance to look after her at a little spot and we have to make the most of that.

I'm an Aboriginal person. I want to support the aspirations of other Aboriginal people, and their relationship to country is really important. So I want to see more opportunities for them to be engaged in managing that country ... it's important for their identity and their well-being.

Several noted the fact of being prevented from practicing cultural burning

Our law was busted long ago and we were not allowed to burn. Well some people are 'fire people' and as we begin to burn again we will let the fire law come back through the fire people. As our kids are able to be part of learning cultural practice, those who are fire people might see their 'naughty behaviours' aren't there anymore.

Cultural burning is a threatened practice. In moving forward agencies need to support people engaging in cultural burning - plan together, encourage it to grow. All should be supported in this. In Aboriginal culture burning was a necessity by law. It was the pre-European land management practice. It was essential. No Aboriginal person would ever intentionally set fire without a purpose.

This is an opportunity for Aboriginal people to reconnect with what should be done. The disconnection has been encouraged by punishment for traditional practices. After this history of being discouraged and the period of punishment, Yellomundee bushcare is an important opportunity for real community involvement in traditional practice.

Aboriginal Participants - Benefits of Cultural Burning for Community

Many participants reported benefits of cultural burning for Aboriginal and non-Aboriginal people. Many saw benefits for Aboriginal communities in getting people back on country: allowing a healthy relationship with country; 'reconnection with mother and country'; 'connecting with community'; 'it helps you find yourself and who you are'; and education -

these kids here, their mums brings them ... that's good for the younger people to have positive male role models but also aunties and uncles around to learn and share off each other and work together;

Many acknowledged the project for supporting their authority to learn and exercise their roles and responsibility to manage country in this place:

...Parks legislation prohibits certain activities that Aboriginal people have carried out for thousands of years. To be able to go back into a National Park and carry out this practice gives back a sense of freedom and purpose to Aboriginal people in following their tradition...

if you're going to be able to take things from country - hunt, gather - all country - you need to give to that country so cultural burning is part of that.

So the benefit for us is that it allows us to come together to do cultural stuff in humility, because none of us know how to burn the country well yet, so we are learning with everyone else.

Several referred to observed benefits of the program for participants -

I've heard many participants express their feelings about what they are a part of. Most of this may be built on emotion rather than any tangible benefits or outcomes (so far). However it is no less important.

(I could see it) on the faces when our first Darug reps returned from the cultural burning up north: I could see change. They had a new spirit, and a new lease on life, a new taste for culture. When you burn you can see - for people it's like a cleansing.

By the smiles on the faces of the people and the joy from reconnecting with country, getting out on country and talking and learning - not just about fire- fire stories, yes but also sharing more stories - fire does more than burn.

One participant noted that

even if people can't get down to do the burns, people are very happy to know that people are going there burning. It's encouraging and I think we can use a lot of encouragement at the moment.

For the broader community many Aboriginal participants referred to the benefits of fuel reduction through cultural burning: increased safety, the *protection of life* and of a broad range of assets from the ravages of wildfire; and the reduction of carbon emissions and pollution. These benefits would eventually change people's attitudes and way of living in this country.

If you burn country the appropriate way you get a healthier country - better biodiversity outcomes: you get better ecosystems health outcomes. So you end up essentially supporting a whole heap of ecosystems that everyone uses - clean air, clean water, good pollination of plants through healthy bee communities (and) a safer environment.

If cultural burning became a mainstream practice it would benefit firies, taxpayers, it would save water and reduce pollution and it would create ('old way') new forms of living in country.. it will be tax payers (who benefit).

Aboriginal people, locals and visitors, and people who live here - as their spiritual aspirations and best practice grows, it becomes universal, then eventually people will find new ways of looking at, and relationship with, country, and there will be a change in country.

Non-Aboriginal Participants - Benefits of Yellomundee Firesticks to people

As well as also noting the benefits of cross-cultural engagement in ways of caring for country, and of bringing a range of people together, *connecting people and country*, participants highlighted benefits to themselves.

Bushcare people like myself and others have learnt a lot from the fire sticks information.

Everyone has such a good time and it's so meaningful. Aboriginal people are so inclusive ...

It's family friendly... lots of little kids running around, everyone keeps an eye on them.

It benefits those of us who want to do it ... and the other 25 million others who just turn up and enjoy it.

It's become very social and quite a tight knit sort of group.

So we (have) this range of ages that was like a sort of contemporary urban 'tribe' – something in between family and community,

One hoped that other places could share the benefits of this experience.

It's not something that could be practiced everywhere. It is limited to certain places. But I still think they could do some small burns (elsewhere) because it would be good for the locals.

Participants found the experience was an opportunity to learn, and connect their learning.

Non-indigenous people, for the most part, see fire as a major demon really. This fire program leads to a better understanding of fire and how it works within the natural bio-diversity of Australia.

It's a real eye-opener for lots of white people to see fair-skin Koori mob... and realise that they still have this extraordinarily strong connection to land and their Aboriginality and who they are and start to slowly understand that it is not white people who define Aboriginal culture and knowledge in connection to land. Aboriginal people define that themselves, and then, generously, choose to share that back with white people and patiently explain it to (us) over and over again until (we) start to get it.

For non-Aboriginal people it is extremely important... to have an opportunity to support those moves and ... to learn about the country as well.

When people come here they get a really strong sense of appreciation of what the local community is doing about continuous connection to land, contemporary connection to land.

My own ability to read the vegetation and the ecology of an area helps me develop a knowledge of country. And if I apply that when I speak with local Aboriginal people then (it)..clearly helps me identify what Aboriginal people are trying to do within a given area. It helps me to read it from an ecological perspective, being that I am aware a lot about Aboriginal culture as well.

Aboriginal Participants: Extend benefits to other communities

All participants saw the appropriateness of welcoming others to come and learn what was going on. For some (including all Darug respondents) this was qualified. Some cautioned that programs need to be led 'culturally'; and some believed more time is needed to monitor and adjust the burning to be most effective. Darug participants responses included the need to first 'get things right':

Once we can work out how to do it then people can come and see.

Whilst aware of the potential benefits for people and country in welcoming others to the site, many Aboriginal participants cautioned that the traditional practice needs to be culturally led.

These benefits can be extended to everyone in the community so long as it continues to be led culturally and does not become a vehicle for political or economic gain. Cultural burning is needed in many parts of Australia suffering the same issues as Yellomundee.

Cultural burning is about Aboriginal people's roles and responsibilities and cultural practices and that means that non-Aboriginal people should be able to support and engage in that process, but they definitely need to respect the cultural laws and practices of those people ... (And that means

not to take) cultural knowledge or cultural practices for their own purposes without fair acknowledgement of Aboriginal people, and fair engagement and empowerment of Aboriginal people. Not to assume control - not come along and, for example, do a cultural burning workshop, then start doing cultural burning on their own land when they're not Aboriginal people, and they don't understand the values of that place, and they're not engaged with local Aboriginal people. And they start teaching other people, whether Aboriginal not, about cultural burning when they've just learned something about it. I've seen that happen. (People) just basically take and run.

There needs to be process there to support that broader engagement. The best way to do that is to build the cultural authority of local Aboriginal organisations and community - local community individuals. They can then support that exchange of knowledge and practice to the broader community through education and workshops in training and so on and just really try and maintain that authority.

(All participants) Welcoming other Aboriginal groups and collaborators to learn from Yellomundee Firesticks

Well, that's up to the Darug people, the traditional owners. Obviously they invited Victor down from Far North Queensland to learn from him, so that kind of thing, and I'm sure that was done in the kind of spirit way. If we did it the right way – like if the invitation came from the traditional owners and everything, it look(s) like the group would invite other people back up, same as we went and visited their site.

That's not a question for me as I am not Darug. I wouldn't burn at Yellomundee unless I was asked by a Darug person, which has happened. I would do bushcare, but not cultural burning without being asked. In my own country I would welcome other Aboriginal community groups and their collaborators, yes.

In addition to the comments noted above, participants explained to date Firesticks has brought together many groups and individuals to work on the site. Also, on Allowah Day, a cultural day for Aboriginal school students within the Hawkesbury, children from years 5 to 12 come to learn about their culture and about the significance of Firesticks.

Repeatedly, while acknowledging that the spirit of collaboration and knowledge sharing is at the very heart of Firesticks, and is the way the knowledge has come back to the area, participants emphasised the importance of observing cultural protocol.

We can learn from each other but we have to maintain culturally appropriate protocols to exchange information and to ensure that we are respecting people's rights and responsibilities. It is important (that it occur) with the request and with the support of the local cultural authority which is the individuals and organisations that are culturally connected to that land who are leading the projects... and the people who come in respect that space.

Some participants described how they could see sharing occur.

I'd like to see (Firesticks) develop into smaller groups. There's a lot of area that needs looking after. ... there is opportunity for another one to develop further up the river and down the river - there could be an Emu Plains chapter of Firesticks, and a Richmond chapter of Firesticks; and that would also facilitate us having to keep tight communication with each other. Because we're dealing with fire we need to know what everyone is doing there too. The involvement with the RFS and people like that that - there are great opportunities there too. (Darug participant)

Participants saw opportunities to educate the community from the site.

Indigenous workshops on plants and their uses to bring a closer understanding for non-indigenous of Aboriginal culture. Nature walks to important areas of significance on site.

The cultural dimension of it I think is really important because I think this project is really so open to bringing people together and teaching people who otherwise would not have access to this kind of stuff.

Collaboration

All participants saw merit in collaboration between NPWS, RFS, community groups and Aboriginal people for a range of reasons, including the sharing of ideas, capabilities, knowledge and expertise, with many participants appreciating the opportunity to learn from each other. It was observed that some organisations could bring funding resources otherwise not available to the project. A diversity of views was seen to minimise the risks of overlooking something that is important to one interest or user group, and of the program being only short-lived, ensuring 'that it's not just something that we do today and forget about it and move on to another program tomorrow'. The involvement of agencies was seen to enable the project to operate amidst a lot of rules (for) people ... to be able to work on country safely.

Fire Training & Authority

One Aboriginal participant would like Aboriginal people who are Yellomundee Firesticks participants to be offered training at a base level to work under the current burning guidelines in order to ensure that current safety guidelines (prescribed burn rules) are observed, which is not currently the case. This participant urged that this training be undertaken with a view to offering higher level training to Aboriginal participants to manage fire.

It's not too complex to teach and it's important to teach the community what is required to (burn) within the guidelines... (Aboriginal participation) is needed for cultural burning to be legitimated over time and integrated into fire service practice. Traditional practitioners need to move within the organisations that control fire in the area today.

Several participants noted that the responsibility for country is everybody's business and that Aboriginal knowledge needs to become part of mainstream fire management.

I think the integration of Aboriginal people's knowledge should be on the top of National Parks agenda, and also the place where Aboriginal people (can) have secure employment and authority to advance their aims - that's also really important.

No matter where you were born, once you come here and live here it is your responsibility to care about the health of the country and the communities within that country.

There is an obstruction around fire generally, for Australians. We (all) need to understand and apply fire in a more appropriate manner. I think the Firesticks program is the first big step into that process.

One participant challenged the way in which the concept of environment is currently understood by agencies in managing country.

I think (collaboration) is deeply important. ..The idea of the environment... is a term which implies something which is not 'us'. It is 'over there somewhere'. From what I can gather, from my involvement with people on this project, National Parks management is not so much of 'the environment' but small reserves of places which are incredibly important and have been lived in for many, many thousands of years and bear all the signs of that if people know how to see them. (Yet) there are places which are refuges for a whole range of plants and animals which are under threat everywhere.

Right Way

Several Aboriginal participants emphasised that collaboration needs to occur in a balanced and culturally appropriate way.

Having the right conversation with each other the right way. It's about partnerships to look after country - build a relationship, grow respect for each other's ideas. You can't just say 'I'm here and going to do this'. It depends on who is in the job at the time. We need to set boundaries that are right for all, so it's always give and take. Find the balance and everyone will win - the land is the winner

As long as those involved can listen to the traditional custodians in an open dialogue. This is important to us because it is our self-determination: we are relearning and trying to experience cultural practice here - it can't be rushed or panicked. We need more studies, more of our people involved. My ancestors encountered Governor Macquarie...(and here we are) 200 years later. This is history. We've been stopped from looking after our country and now we are taking that back, and giving back to country.

Several non-Aboriginal Participants saw the Firesticks collaboration as an opportunity for government and community to deal with the legacy of dispossession.

My ancestors violently and viciously dispossessed the Aboriginal people with no compensation and forcibly removed their children. .. I get to live on this land and inherit the benefits and wealth of the people who took it. There is no question that all of that is directly from the stolen land...So (we're) just giving something back to country because it has been so badly degraded; but that extra level is giving something back to country because it has been so badly degraded by white people for their own profit without giving anything back.

I just think ...we came, we took, which is what we did, 200 years ago, and now we know better. I believe we should be working now with them and become more as one because ... we should be working with them and listening to them. .. because they do have a longer time here and lived quite happily without us.

Several participants reflected upon the success of the collaboration, one stating that *This feels like a dream that's finally coming together....*

Often (Aboriginal people are) wary of the government thinking that – oh they were just going to take something away again; or if they give them information - that it is going to be taken and used against them. So there was a real reluctance for Aboriginal people to work with the government. But now with Parks and bush care - we've been showing that we can all come together and work together to work out things with each other.

I think it is (important) and I think it is probably a challenge for (the agencies) to do that; but I think cultural burning is a way to enable Aboriginal people to actually go and do burns as part of that culture... The people around Sydney have nowhere to practice their culture... so I think it's a great opportunity.

D KNOWLEDGE OF COUNTRY

What helps you, or guides you, when you are working on country?

Most Aboriginal participants are guided by spirit and by country. One referred to being guided to good decisions 'almost by magic'. Three stated that they are guided by 'gut or 'gut feel'.

My belief in Mother Earth and the realisation she gives me everything I need. My belief in the Sky Father, creator, and the good ancestral spirits that surround us and protect me. My gut feel tells me that what we are doing is right. The signs are all around us to see, hear, smell and touch. I'm fulfilling my role as a human being on this country.

Previous knowledge - of the old people, as well as elders, the uncles, the animals - listening to country.

Being Darug I naturally hear the country calling. I'm someone who understands that all this is connected. It just comes from inside.

It's just what you are born into. I was born into being an Aboriginal person and I have responsibilities.

Well country is what helps and guides - and that includes the people, the plants and the animals and the spirits and the ancestors like - they're the guides. And we draw from each other, we share knowledge, we reflect. And it's about setting the intent.

This latter participant shared the way country guides him in detail, explaining that intent is at the core of listening to, and reading, country. Knowledge is sought from culture and contemporary sciences, and decisions are based on a feelings for what is right.

As an Aboriginal person I walked on a lot of country that I don't know the story of ... I don't know where the good spirits live and the bad spirits live and whether massacres were or where battles were, or where the camps are, or where the ceremonial places are, or the women's are, the men's places. But wherever I go I always acknowledge that I don't know that, and that I respect the place. And if it doesn't feel right to be there I'll ask a question, or I listen to the country, to the animals - like you might see a snake and it scares you and you might say well like maybe I won't go that way, or you see a beautiful flower or animal you might walk that way. So you're sort of engaging in the landscape around you, but always with that intent that your respecting. You've got to use your feelings and emotions to help guide you but with that intent that you are respecting country, and you're there to give to that country: you're not there to take. And that's reading country, as well. So you're looking at it and just seeing weeds, or just seeing old trees which fire might damage, or your seeing young trees which fire might damage or you're seeing no trees which maybe means that you need fire or you don't need fire. So there's a whole lot of things you learn about these things. You can see a lot of the artifacts, cultural things, scar trees (and you're) using that information - you're walking to a cultural site, and you can tell people have been coming there hundreds of years, engraving in the rock. And you look around and say "well, where were they sitting? Where were they camping? What food were they eating?" And you're asking yourself those questions and thinking 'ok well if I'm going to look after this place how am I going to do that? What am I going to be able to do?' So there are the questions you asking yourself. And you're also going to be realising that, like, 'maybe I need to be talking to that uncle who knows about that this place - can I get an opportunity to talk to him'? Or talk to the local government organisations, National Parks, Local Land Services, the Rural Fire Services and find out what people know, find out what threatened species there are or what vegetation there is'. Use all the knowledge you can get about that place - science and cultural knowledge, and come up with informed decisions based on those feelings but also the evidence and the science and all that you have around you. You put it all in the mix and see what feels right.

Many of the non-Aboriginal participants relied on guidance from others with knowledge, particularly people on site, with several stating that they are guided by seeing improvement in the land.

Obviously listening to whoever is running it... learning to listen and watch and learn and not sort of go tramping in, boots & all – you know the way white people do.

Aboriginal and non-Aboriginal participants stated the importance of being open to knowledge from all sources. Some call on their own knowledge and research - *reading texts, historical journals, learning from TAFE* - and most rely on locals with knowledge, and on staff with expertise from e.g. TAFE and NPWS.

One of those with significant local knowledge and expertise explained how participating and speaking with Aboriginal people ... It helps me to read it (country) from an ecological perspective.

My own ability to read the vegetation and the ecology of an area helps me develop a knowledge of country. And if I apply that when I speak with local Aboriginal people then I can see that the knowledge I have - it helps me to read it from an ecological perspective ... I can walk into areas like Yellomundee and I can see how that fire needs to be implemented into Yellomundee on a big

scale in terms of carrying out cultural burning practices that will maintain the health of those plant communities.

Another with land management expertise is guided by a goal.

In the back of my mind (it's) having clear outcomes. Down at Yellomundee the outcome I believe is to ensure those eucalypt communities, those vegetation communities, those endangered communities are supported by the activities that we're doing. What guides me is (the idea) that what we do today needs to occur tomorrow, and needs to be sustainable.

One Aboriginal participant was helped by seeing impact - country starting to look a little bit like the way it was described by the early colonists

I got very excited (when) I went up to Cape York and saw them doing exactly what was described, and the fire doing the way it was describe that is licking the bark off the trees, clearing the up understory but leaving the canopy intact. So that encourages me to be living out what our ancestors were doing. (And) we get a lot of help from traditional knowledge burners - people up at Cape York and that, they've been instrumental in this happening.

When considering improving the health of country Yellomundee some participants referenced 'all country'. Some considered places where cultural burning had occurred in the past.

When Victor came down from Cape York we went to spots in the mountains and he took us into a place in Leura where you actually get to see grass and trees in the forest - it was a eucalypt forest and I'm not saying it all looks like that - but when we talked about successful burns I flash to there.

Some participants try to read the previous uses of the landscape at the site rather than going outside that place, and consider those parts of the site that are less disturbed.

You are visualising - 'okay so there's a whole lot of trees and plants and animals that I can see, and there are a whole heap that I can't see that are here' and you might have to go and have a better look for. And then think 'okay so what's happening in that landscape, what should it probably look like based on its natural responses to impacts - fire, drought, flood - and what are the potential management or impacts that people would have had on that place in a sustainable way? People would probably have been walking through it, if it's a place with high resource use - ..and they might be camping'. So you've got to sort of put in what might naturally happen and what people might do, and then think about the responsibilities that those people might have so that they look after that place I guess yes.

Yellomundee is my reference point for me. But who's ever country I was on I would try. I would try and do the best I could do for it.

Some have begun looking at other places they know and imagining cultural burning at those sites.

There are lots of places that I think cultural burning could be re-introduced down through the Monaro, that area there definitely.

I've done some paddling on the Wollondilly and I know there are patches there that were either originally areas where there was burning done, or there were areas where there were farms that

have cleared the land, and they've got weed problems down there. When I look at what's happening here I think 'I wonder if they could try it down there on the Wollondilly'.

What do you know about the plants and animals at Shaws Creek Aboriginal Place?

Several participants had extensive knowledge of the species in the area. The majority had basic understanding of the presence of weeds and feral animals, and of the more obvious native plants and weeds

I have limited knowledge of plants and animals at Shaws Creek.

I don't know really anything. I'm not a scientist. I rely on Vicky and Danny to point out 'there's a native rat', or to see the new little green shoots coming out when they do, to tell me their name.

One participant referred to endangered species: I know that there are very few endangered plant species and animals. .. the Plan of Management actually talks about the fact that it has very few threatened plants and animal species because ultimately it has been grazed.

Aboriginal Participants

Aboriginal participants often referred to the species in relationship to country and people.

I know our animals and I know our stories. I know the importance of our plants and animals and us. It's about the country. ... The country owns us and we do what has to be done. Anything we do isn't for us, it's for the country.

Native vegetation is struggling; eucalypts are outcompeted; bellbirds, rabbits, pigs. Cultural fire gives breathing space to native plants and stimulates native seed banks that lay dormant. Where there was once just lantana or lovegrass, there are now some native plants and seedlings popping up amongst the burnt patches..... Our native plants are of this Country and they know this Country and Country knows them. The weeds are not.

They're also having to deal with newcomers here like us - I think they've got pigs, got wild horses, rabbits, they would have foxes... A lot of people come down and use that place. People take their dogs down there. It's intense dog activity and stuff so it's not natural. So the country's having to deal with all that - the animals down there must be doing it worse than us because they've only just had someone taking it up for them.

Well we know about the rock wallaby, Bell miner bird, the rabbits, magpies, currawong, wood ducks and ibis along there. There's buffalo (grass), lantana and privet - in fact the privet grows very straight there ... The introduced species - they're all part of mother earth - they have a purpose there - just because they aren't native isn't cause alone to kill them.

Another respondent also challenged unquestioning removal of all feral animals.

We've lost species down there - but I just personally feel that even the foxes down there - they're all God's creatures so I don't know what to do about that - I don't know that I could kill a fox just because it was a fox.

The relationship between species - both native and exotic - that now exists at the site requires careful consideration:

So there's an issue in the relationship there. There's a little pheasant that live in the love grass and a whole heap of other species that are dependent on both natural and invasive ecosystem that's in place there. So it's important, when people think about how they going to manage that landscape, that they're thinking about all those other - particularly animals - that come and go but you can't necessarily see them. There are also a lot of plants that you won't see all year round that will come up and down because of seeds, or because of disturbance or because of fire. There are things you can't see the landscape that are there and belong and you need to think about.

There are also some issues around the eucalypts there and the Bell miner birds - they're a native species but they're potentially having a negative impact. So there's an issue in the relationship there.

One Aboriginal participant referred to the wealth of resources at the site.

... like wallabies: people would be eating them; like grass there: people would be burning; there's some geebungs: people would be eating; then there's the river there so you've got estuary stuff there; there would have been yams there, 'though I haven't really seen any - maybe daisies and stuff - but there probably are some around.

This participant wants further research: doing some good biodiversity cultural surveys there is something I would recommend. There has been some survey done but I haven't seen the results of that yet.

All participants - Range of Species

In addition to those already mentioned the Firesticks participants reported

various wallabies, kangaroos, a few red belly and brown snakes and goannas and you've got various other skinks, dragons and water dragons on the water edges and yeah, and someone once told me that they saw some sea eagles up that way... come out there to nest up that way... and there's a red crowned toadlet that we're aware of around waterways.

It's amazing what you see from the river when you're looking back on to the land, wallabies and snakes, even platypus, all the native animals, and of course there are introduced animals too like deer and pigs. We know a lot of the animals that do exist in the park, probably seen most of them.

In addition to those already apparent, several other participants shared their understanding of the ecology of the area.

We've worked there for a long time now, and I've actually put together a little booklet on the plants that are there. I have a fair knowledge of the plants and the vegetation communities that are there, and the animals that are there ... from being a member of WIRES. I think I've got a handle on a bit of that stuff.

I know the habitats that are found in Yellomundee and what animals live within those habitats, whether they're present or not. I can interpret what animals would have been there in the past

and identify what habitats they would have been living in. And I know pretty much most of the plants that are in that region. ...for 25 or 30 years, so yes I'm very intimate with the animals and plants and things that live there. I know a lot of the ecology and all the interactions that are going on in that area. But I'm not an Aboriginal person so I am not going to claim that I have the knowledge as a cultural person because I don't.

Shaws creek vegetation is a transition area between the sandstone escarpment of the Blue Mountains and the Cumberland Plains parts are an EEC (endangered ecological community). Animals inhabiting the area include, Swamp Wallabies, possums, bush rats, lizards and snakes and a limited birdlife due to Bellbird dominance. Rabbits and pigs are a feral problem.

Who do you believe are the knowledge holders for plants and animals in this area?

For most participants Firesticks represents 'shared knowledge'

Well, I learn a lot from the National Parks people, and from traditional owners and from Aboriginal people who have been speaking here, and from the local bush regenerators, so I guess local knowledge coming from different angles, from cultural histories – oh, I just listen.

The Aboriginal people, and in particular the Darug, were seen as knowledge holders by many participants. Most of these participants also relied on others form information. One participant considered there is no one Aboriginal person that is 'knowledge holder' as such.

Aboriginal Participants

The Darug participants considered that knowledge is shared, with one challenging the concept of 'knowledge holder'

The idea of knowledge holder doesn't sit right - we all share knowledge. I don't use that term. It suggests that different levels of knowledge are more important. That goes against the beauty of our way - many have some knowledge and we share it.

The humans. I can't point to one or two experts down here - we're all on learning curve .

If we connect with the land more, more of us will have more knowledge. And there are intuitive ways of knowing. Other traditional owners may have more knowledge, and Parks (NPWS) have some knowledge. And we'd like to acknowledge the local bush care regeneration people - and for their constantly caring for country.

Other Aboriginal participants also relied on those who have knowledge that can help identify species, and that Firesticks is about sharing knowledge from all sources .

We all hold different knowledge and we can all contribute and share what we know. We don't always have to agree about things but we can at least respect other peoples beliefs and knowledge.

Anyone that's engaged in that landscape will have some knowledge around plants and animals and I guess some people will have high levels of knowledge and some will have different values

around what they associate with knowledge. And there will be plenty of people there who don't realise they have knowledge until you actually pull it out and tell them- 'yeah, that's knowledge.'

One Aboriginal participant explained how traditional knowledge comes.

It depends on the relationship, and who I consider are my aunts and uncles... I have been taught by my elders since a child. That's who I listen to. I listen to what I've been taught and that's it. It's about listening and not about talking too much; listening to the right stories; knowing your history and where you come from - your place. It's a complex, deep question.

All participants

Many participants referred to the knowledge brought by the different groups participating

- I say some of the local Darug elders are knowledge holders.
- There are also other Aboriginal community members there that have a lot of both cultural and contemporary knowledge of the plants and animals.
- There's also a whole heap of other agency organisational staff, National Parks , Local Land Services, Mura Mittiga they've got good cultural and contemporary knowledge holders.
- then you've got the bushcare group, the Willow Warriors guys, the Aboriginal bushcare.

Many participants singled out NPWS Rangers and also named several longer term local participants who bring particular land management and bush regeneration expertise, and who have studied the area closely over many years - in particular Peter Mobbs, and Danny Lett. One saw a connection with the Hawkesbury Rainforest Network

... you'll find all these people are actually connected with Peter, and Robin Woods and Peter are connected in terms of knowing each other for quite a while (through) a group called the Hawkesbury Rain Forest network (now part of the Hawkesbury Environment Network).

Participants explained the difference in knowledge each group brings to Firesticks, and explained the different approach of cultural learning.

Danny's a professional bush regenerator. So obviously he can point out and name, and say whether it's native or weed, or what it does, or how to get rid of it because that's his job.

With the Parks guys it's a more macro sense of ...we'll do the burn here, we'll do the weed there or whatever, so that's more of that land management

The bush regenerators that are there that actually know the relationships between plants and animals and people; if you're talking to some of the traditional custodians you can get an idea from them about their knowledge and things that you may not have thought of; and the Parks people that have particular expertise, and botanists — a whole range of professional and non-professional knowledge that I would consider.

The stuff we learnt from Victor (FNQ Aboriginal cultural burning knowledge sharer) was about reading the colour of the smoke, watching for when the smoke rises, how the lizards and ants and that behave. You can watch their movements from up the trees and read how fast the fire is moving and whether it's at the right height and so on. Lots of new ways of thinking because I

wouldn't think to look up the trunk of a tree to check if there are some lizards going up a bit higher, or some ants changing direction. You learn to watch the natural world and understand and take your cue from it in a way like that, which is not our way of learning. (We go to a library and look at a picture of lizards!) So that was really good - not only for the actual content of the knowledge, but also the way that he taught it, and the way that thinking really opened my mind to new ways of observing the world, which is very good.

Why do you think this place was chosen for the cultural burning program?

Participants cited many reasons this site was selected for the Firesticks cultural burning program, including the Aboriginal cultural significance of Yellomundee - *a special place* - the terrain and vegetation types, and the fact that it was public land and therefore possible for Aboriginal people to access. Many credited the presence of an active Aboriginal bushcare group and long term bushcare activity at the site,

we have a bushcare group in there and certainly that's why Firesticks was done there... I'm always on about that humans are a part of country, and I think because the humans down there have started investing the time and energy... I think once that place started getting energy in (it was just a matter of time). (Darug participant)

The 2014 classification of Yellomundee as an the Aboriginal Place was considered a trigger by some.

I think it kicked off when this area got declared as an Aboriginal heritage site. I guess as part of that process (we've been) getting it to that stage when the Aboriginal communities say that we should be doing cultural burns in there as well, which took place hundreds of years ago.

An Aboriginal Place should not just be a token label. It should be an Aboriginal Place in every sense of the word where Aboriginal culture is practiced, shared, and is living.

One participant gave credit to the NPWS Ranger at Yellomundee, Paul Glass, for the significant paperwork involved in gaining permission (*buckets and buckets*). Several mentioned that the traditional owners had been seeking permission to burn over many years.

The enthusiasm of the traditional custodians that come to our bush care days... it is something they wanted to do for a long time.

Several mentioned a breakthrough at NPWS.

Darug had visited Queensland, and there had been meetings, before the breakthrough.

A change in management... allowed for us to be able to actually do it because prior to this we felt that there wasn't that opportunity ... it wasn't a priority ... it wasn't really taken seriously. But there has been a real ground-swell for burning, (for) traditional methods to come back into play.

While several participants believed that cultural burning has obviously been going on here for a lot of years, probably thousands of years, one participant thought the area was not a traditional Aboriginal cultural burning place

probably Firesticks may not be the ideal thing in summer in the areas around here because originally they would have been like rainforest so we're doing burns in places where maybe they wouldn't have in the past.

The fact that the site was degraded and had multiple stakeholders makes for a good pilot site, according to one participant -

I think it's a great spot because it such a mess.

It's been heavily impacted. It's got a lot of weeds. They don't see it is having high conservation value so they're probably a little bit less concerned about negative impact

One participant, who had been one of the instigators of the project, pointed out the many advantages of the site:

So it's a place that's seen as a bit of a damaged one, (where) people can kind of play - it's got lots of impacts: it's been farmed; it's got bike riders and so on; and it's also got the bushcare group going on there - so I guess it's got a whole lot (going on). From a broader Firesticks approach: it's close to Sydney, so you can take people there, you can run workshops there; it's got local Aboriginal people engaged in managing it there. (There was some joint management /comanagement agreement, which is now lapsed). We've got Paul Glass and he's Ranger there - he's not Darug but he's a local Aboriginal person... You've got a whole lot of issues that you can use fire to manage, and you've got a whole lot of people who will support it, and you've got access to it. That's a whole lot of things.

It's an Aboriginal Place. It's a part of the pathway up into the mountains, so from a broader cultural landscape point of view it's interesting. And it's also a place that has obviously had cultural fire management as part of the management of the land there for a long time.

Because there's so much going there it's kind of a melting pot for exchange and shared values and stuff. It's a really good place to sort of build a story there for people.

What do you know about the timing of the burns and the reasons for that timing?

Cultural burning involves 'cool fires' that are lit in cooler times of the year when temperatures are low, humidity is high, the wind is gentle and the county that you are burning is ready to be burnt. Dead grass amongst green shoots is one sign among many others. When dead leaves, branches, twigs, bark and other fuels have accumulated on the ground surface, it may be time to clean it up. You need to know your country in order to culturally burn your country. Cool fires remain low to the ground and do not burn the trunks of trees or the canopy as this is against cultural law. The trunk and the canopy is where the tree flowers, fruits and where birds and animals nest.

I'd probably talk about timing around seasonality, around the moisture in the ground, around the wind, around time of day. I talk about the timing since the last fire: for some species fire should probably be more repetitive: within maybe a year or two you may burn grass again because grass generally likes fire within a one to five year cycle, and grows on like an annual cycle, and seeds on an annual cycle. It can handle fire pretty much every year. But other species - fire will impact on them depending on the severity of the fire. So you don't want to burn too often for some species at a particular fire intensity (and) you might be able to burn every year for some species when it's only cool burns, but if you burn hot every year you will lose a species from the landscape... If you

burn at the wrong time of day you might be too hot; if you burn at the wrong time for the wind... so you know, the timing of the burn is important.

This participant had extensive traditional knowledge of the process of cultural burning. They noted that timing needs to have regard to shaping the landscape, and the intended land use.

You really need to look at what the objective is you were trying to achieve. Like is the objective to create a clear space for an access pathway for people to be able to camp, which (also) creates grass for kangaroos and creates a pathway for emus? Or are you trying to create healthy growth of geebung fruiting berry trees. So you've got to think about what are you trying to achieve at the local and landscape scale. And so the timing of the burn will have a big impact because if you burn things before they fruit you won't get fruit; if you burn things before they seed you won't get seed to eat or for regeneration for the next year - then that's a problem.

Cultural burning at Yellomundee happens within the practical realities of contemporary life.

The timing of the burnings is also now linked to people's availability and calendar and the permissions, and the degree of bureaucratic control and caution restraint around fire.

You have to wait for an ideal time, which isn't always the case when we do the burns here because we come down here on a certain weekend, or a certain month and if it rains a day or a week before that could have an impact on it... To do a proper burn the conditions aren't always ideal.

I think that the timing of the burns and the size of the burns, the program for that probably needs to be developed further. These initial burns in there are really just the first step to develop that program.

Being able to get burns in at an optimum time... isn't always possible. (We aim to burn) at a time when you actually get some benefit and meet maybe the majority of objectives - and you might need to make some compromises.

The regulatory regime impacts the timing of cultural burns - *There are a whole lot of approvals to do this stuff*.

In the Yellomundee environment there are a lot of properties around that area, and a lot of responsibility to ensure that the fires that they light do not escape. The timing is very much limited to the fact that there are broader demands on our activities to ensure protection of life and property.. Fire outside of those cooler months would require fire experts, rather than community members who may not have the training of those fire fighters.

A lot of the rules are related to bush fire management, not necessarily cultural burning activities. And those rules are slowly but surely becoming more part of our community, our society.

There's like 'thresholds' that we can burn within and because it is a special area, logically we have to be aware of this and plan our burning around that.

The participation of RFS is appreciated by participants.

Dan Chalker is a fires expert - he really knows about how fire behaves and has seen it get away so he's very helpful there.

When considering the timing of fires at Shaws Creek one participant explained that traditionally, in this region, cultural burning was not necessarily stopped during what we call the summer months.

That place has needed burning for a long time... we don't know a lot about that yet. For instance, I know from the records that our people burnt in summer: if you check (colonial surveyor) Evans' record and you'll see that in January (the third I think it was) he's writing 'my God! The natives have put the mountains on fire'. So there were burns in February as well, there are recorded burns that year.... (Today) the times of our burns are more expedient with the safety aspects and logistics like that. It's not yet timed on our cultural knowledge. (Darug participant)

One participant chose not to comment on burning as he is not an Aboriginal person and would rather prepare the ground:

I prefer not to say anything about that. I want to be doing the other weeding. I've seen the process and I think I understand. But I don't **need** to understand it because it's so culturally significant. If I can just prepare areas so that the Aboriginal people can do a cultural burn, that's a better outcome.

The way cultural burning is performed.

Some participants had deeper understanding of the way cultural burning is performed. However for most participants Yellomundee Firesticks was their first cultural burning experience, and they described learning from Aboriginal people with knowledge of cultural fire.

Oh yeah it's quite interesting, it's very effective. The idea is to have as little heat as you can to do the least amount of damage. Like the animals to escape the fire – little bugs and critters will climb up the trees; whereas if it was a bigger fire they'd probably all be killed in the process

It starts in just a small area, usually from one spot, and just let it spread out gradually. The idea is not to have a large build up of fuel on the ground so it doesn't get too hot (or) you're going to burn any native plants or seeds that are on the ground - defeating the purpose of the burn.

The burning activities are restricted to very small sized fires. It's very much seeking to use fires and watch what the fire is doing and then to extend the fire... a cool burn I suppose.

The involvement of community was a defining feature for some participants.

I'm still learning about this, but so far it's about bring people together.

I think it's a more gentle approach, the courtesy to engage people in the activity and in the conversation about what's happening - to remove the dominance of the weed species or the grass species, to allow native plants to have an opportunity to establish themselves.

One participant shared observations of the first cultural burning:

The first burn we did we just had the big long forks (rake hoes) that firemen use to rake through the ashes and stuff. That was to manage the piles of dead lantana that we were burning, so if they got too high that means they risk going onto the oil in the eucalypt leaves, and you can see the smoke turning darker. You spread the fire around a bit and drop it down a bit at the edges so that then brings the height of the smoke down and lowers the risk of the canopy catching.

So these little spot fire were just burning everywhere and little groups of people were standing around watching... No one was the boss but we all looked up to the elder. Victor was the teacher.

In one of the backfires there was this little family there. They were darker skin - an Aboriginal mob... And they didn't have the pitchforks. The dad had just gone and got hardwood long sticks and he was doing the same job as the rake hoes do but just with a stick you know...You get the original implement that the rake hoe is basically modeled on, and made out of steel or iron or whatever. He was poking and dragging and managing his fire exactly the same way....

Participants acknowledged the cultural authority of Aboriginal cultural practitioners.

What I have learnt is the importance of protocols of who speaks and acts for the country.

One experienced practitioner of cultural burning explained the importance of knowing before a burn the 'values' of the parties doing the burn.

Before you implement burns you need to identify some of the key values for the people who are making the decision around putting the burns in. So that could be cultural values that could be economic values, it could be assets like buildings, and ecology. So there's a lot of values there. It's good to identify the values and objectives. And then those values and objectives will determine the burn planning, the technique, the timing, the size of the fire, of the season of the fire - all that sort of stuff.

This participant explained the importance of burning *under cultural authority*.

Aboriginal people have set values, set objectives, set burn plans. They're involved in putting the burn in at some level - they might not be lighting the fire but they must be involved at some level: even handing over that authority for someone else to do, it or doing it themselves - and they follow some protocols around respecting country, following through with obligations and rights and responsibilities. And then implementing the most appropriate technique. (This) may not necessarily be the traditional technique for that bit of land because you may be dealing with a whole heap of legacy issues - around land use change or inappropriate fire regimes overtime - so... you might need to put in a hotter first time because you've got a whole heap of shrubby, dominant, dense vegetation (which means it will either burn or it won't, and when it burns it will burn hotter). And after you've been able to reduce that then later you can burn it cooler.

The participant also explained that, while needing to be adaptable for modern conditions, customary practices are also important

Starting the fire I always say to people: do you want to use some fire sticks to get the fire started? Not because it's easier. It's obviously easier to get the fire started with box of matches or a drip torch. But it kind of helps people to reflect on the cultural intent and a bit of ceremony almost. And do you want to do some little circle burns and spot ignitions? But because of risks people might want to put a little bit black line in a containment area or whatever. So you've just got to look at adapting some of that technique. Aboriginal people have or always done that... But they need to maintain their cultural authority and intent for it to be a cultural process.

Hazard reduction burns

One participant who sees that the cultural aspects of burning at Shaws Creek are about developing a spiritual and cultural connection to that landscape also see the potential for the development into a holistic program, for eg the Blue Mountains, of you could say 'hazard reduction' in non-indigenous language. The program would inform

the need to burn areas, and which areas need to be burnt, and to protect fauna etc that occur in that area. I am fully aware of what happened in 1994 when a big fire came up out of the Grose Valley and basically decimated the whole environment down there. Everything was burnt... For me that knowledge about what has happened in the past in wildfires will help us, or help the program, to work out fire regimes and burning patterns across that whole region there in order to help protect it from a major fire.

Another reflected on current hazard reduction regimes.

Current hazard reduction burns can be problematic as the ecosystem threshold doesn't take into account fire intensity. It doesn't differentiate between a hot fire, which leaves only the trunks, and a low intensity fire. There is no effort to achieve a low intensity fire. Regeneration times in some areas are lower than allowed for by the hazard reduction regime - it may burn every 15 years but actually needs 50 or 60 years to recover.

Is more knowledge needed to restore country at Shaws Creek?

Most participants stated that more knowledge was needed restore country and to understand cultural burning at Shaws Creek, with consensus encapsulated by the quote *We need some trial and error, we need some research projects, we need to learn things from each other.*

Aboriginal Participants' Responses

Darug participants recommended that knowledge be increased

by being out there, sitting with country and working with it.

We need science to back up what we're doing there.

We need to do more study. I want to see us bring in - as well as the people from TAFE - people who study biology, sustainability, bushcare and fire scientists, people with cameras (like are being used in the eastern bidjiwong study). We need grants to make these connections. And then it goes to the geography level and anthropology and archaeology. That's why we use the circles - because it's all connected.

Other Aboriginal participants agreed that more knowledge is needed.

I think there is more knowledge needed and I think that people should always be asking for more knowledge because people, country, plants, animals - they're always evolving. And the climate - it's always changing - it always has, and it always will. So you've always got to be seeking knowledge and wisdom.

We may never be able to regain the past ecology of Shaws Creek. So knowledge is needed to restore the country to some resemblance of a really functioning system - by talking to people with expertise, with experiences in other areas but also by observing what we've seen out there and then adjusting that to get the best outcome for that country.

I believe that working through this whole process - with you and everyone together - is how we'll get there...as we move through the process and work out how we do it legally and properly in regards with the Parks systems, the RFS systems, and tying traditional cultural awareness and knowledge and beliefs into that.

Some Aboriginal participants consider that, as the project grows, more knowledge will come.

The more people who know what's happening down there at Shaws Creek (the more) you'll get more knowledge holders who will come forward and talk about it... Talking to each other - not necessarily around a table, but through word-of-mouth (to people) who know about this... It's fine to have it all in a book to say, 'oh yes let's do the same thing and use all the chemicals in the world to get rid of some of this'. There are better ways of doing things and I think that culture can come in. But there's no reason you can't use both together.

Other Aboriginal participants expanded on the approach to gaining knowledge.

Observation is important to gaining knowledge needed at Yellomundee. It would be good to look into (building) relationship with researchers who can help with information over the long term. It would be important that this be driven by the community. But a relationship with a university program (eg environmental science) might be useful. It's important to use observation and not manipulate the outcome.

For Shaws Creek I think there are some significant knowledge gaps evident and they need to be addressed. ... they have been able to build a good constituency of people engaged there. They've got different stakeholders, different knowledge holders and different groups engaged in the place which is great, so they're bringing knowledge holders in.

There are a range of environmental issues at Yellomundee including for example, Bell miner associated dieback. Knowledge from research and projects being undertaken at other sites may prove to be useful for applying at Yellomundee. There are also treatments of lovegrass being undertaken by NPWS at nearby Scheyville National Park where the application of herbicides and mechanical removal is being used in conjunction with fire. All knowledge is valuable and can come from many sources.

One Aboriginal participant stated *All the ancestors are gone so it's too hard to get that knowledge back*. Another laid out a strategy for accessing knowledge and sharing knowledge needed for cultural burning in a contemporary context. This involves initially identifying gaps in knowledge and barriers to knowledge exchange

To facilitate some specific knowledge exchange in the identified gaps we need to do some planning; some 'on country' kind of workshops about identifying specific knowledge gaps; and possibly identifying some processes to fill those gaps. We've got the knowledge in the space how do we facilitate that exchange? What are the barriers to the knowledge exchange? (It could be) confidence; it could be relevance - people aren't being drawn into that discussion; it could be

ownership - people don't want to share the knowledge; it could be that people want to be paid for it. There could be a whole lot of reasons why knowledge which is within the group isn't being exchanged or realised.

And it could be the knowledge that they have needs to be grown - so we don't need external knowledge, we need the internal knowledge to be expanded upon. We need to support that process, we need some trial and error, we need some research projects, we need to learn things from each other.

The participant recommended addressing gaps in knowledge in a targeted way: bring in consultants, bring in mentors... run workshops, do knowledge exchanges. Send some individuals off to other projects at other knowledge sites (like we've done by visiting Cape York).

The participant proposed a strategy for proceeding.

It really needs a process where the local decision makers - by which I mean Aboriginal knowledge holders, National Parks and local Aboriginal authorities, and maybe some other groups - they say: 'Who do you want to talk with? Let's come up with a process to identify those knowledge gaps, and create a safe environment where people aren't being kind of questioned or examined or asked to perform. We'd be providing an... on-country experience, where we can maybe get some support for facilitation to bring those issues forward. I've got some ideas how we could do that. One of them is looking at linking Shaws Creek to other project sites within the study area around the cultural pathway. Let's see... how fire would have a role in supporting that... (Use a) message stick - let's take the Yellomundee Firesticks message ... There's also the Blue Mountains Firesticks group, that's a linkage there; there are also partners within the Nature Conservation Council project in the north; there are projects out to the west and southern NSW, Victoria, Queensland in the Territory in Western Australia - there a whole lot of potential opportunities to engage with other groups doing the same thing.

There are scientists and botanists and cultural advisors and stuff around other fields that we could engage with but (first) we really need to work out what the knowledge gaps are and what the priorities are that people want to focus their attention on.

Non-Aboriginal Participants

Some non Aboriginal respondents believed that the knowledge is already to hand.

Wouldn't you have enough knowledge like National Parks and the Aboriginal people? We got the knowledge to do it but what about the cost?

No, I think we have the knowledge and the tools now.

I think they've got as much knowledge as they need. I think they just need people to do the work. You could talk about this forever and a day. There's only one way to fix it and that's just get in have a red hot day and knock it over.

Others saw the need to gain more, several acknowledging the experimental nature of the project.

Given the fact that there are so many plants and so many weed species... I suppose if we had the answer the place wouldn't still be infested by weeds. (More) knowledge might lead to better access to funds and a more focused effort (than trying to) work out what is the best approach.

Knowledge is needed to provide some sort of pathway so that next year the bushland is better off than it is today.

It is quite diverse - in good and bad ways - down there, mostly bad ways unfortunately. So I think we just have to keep learning as we're going and experimenting.

I think there is an experimental dimension to what's going on, which is about trying things. There are a whole lot of different people with different kinds of knowledge and a shared spirit to work together to do those experiments. I think it is really important...try to learn how to anticipate what will happen... You could do fantastic bush regeneration and cultural regeneration if all the adequate resources were given to it.

Two of these participants outlined how knowledge can be gained from working strategically on the site.

Firstly we need to know what we want for the landscape. We then need to understand the impact of burn frequency on this particular site. We need to plan burn area, and importantly, the follow-up on those burns in terms of bush regeneration. Ecologists and cultural burners need to come together to understand the impacts. Then desired outcomes for areas can determine what areas to burn and how frequently.

More burning plots using different techniques, control areas. Followed by monitoring and reporting.

One participant called for the project to be adequately resourced for cross-cultural education.

There is always more to learn. It has to be properly resourced. So often bureaucracies and white people ... makes these mistakes – think that you can just go up to any Aboriginal person and ask them to share their knowledge. But they can't keep sharing everything for free. They're an impoverished community they've been impoverished by the state, by (us) white people taking the land and profiting from it. We have to be able to ensure that this is ... a proper cultural exchange... One of the ways that we learn best from each other is to take time to sit down, e.g. have four camps over the six months. Ensure that Aboriginal elders story tellers, cultural custodians, smoking ceremony - all of that - (are) properly remunerated for creating the environment where we can learn and share their expertise.

Who or what do you rely on for information when working on country?

Aboriginal participants

Several Aboriginal participants explained that they relied on 'spirit' or 'gut feeling' when working on country, as well as people with local knowledge.

My gut (spirit) - that's what I go with first off. If something doesn't seem right there I won't proceed. I take a lot of notice of Danny - he's just more knowledgeable on plants and stuff. He's a white fella and that, a beautiful heart, and he's put the time in on that place and he knows that place and the plants better than anyone so I'd be an idiot not to ask Danny. It's embarrassing how much I have to keep asking - 'what about this one' and he's so patient.

Learn bits off everyone: scientists, National Parks, Firies, Bushcare, listen humbly and learn. And we need more. We have to just sit and talk - with the grandfathers and all the people from many specialisations.

I go with the Leonardo principle. Apparently Leonardo de Vinci - people would tell him how to paint and his advice was you listen to everyone you just don't have to act on it. As well as listening to spirit - I listen to that more than Danny or anyone else - also, like the RFS - they burn for different reasons, so I'd listened to them of course - they've got experience with fire. It's like with everyone - I'd listen to them, and then make my own decision - I expect that from everyone.

I would rely on all of those people, and depending on my own assessment of their knowledge and skills I guess I would weigh their information differently... You're assessing people but you use all the information that you have at hand and you talk to everyone. Because otherwise you might miss out on some useful information.

All Participants

In response to this question most participants rely on local Aboriginal cultural advisors, National Parks and Wildlife staff and the local bushcare advisors. Aboriginal Advisors from other areas (including the Blue Mountains) were also relied on for information, and many of the participants are also engaging in their own research. RFS, environmental scientists and other local experts were also relied upon. Several were not aware of any environmental scientists involved, but understood that some research had been done. Participants also learned from cultural fire workshops and conferences.

Several participants relied only upon the person leading the burn as they saw that this was important for managing the event. Several stated that the presence of RFS was reassuring. Another said that they believed that RFS is

slowly trying to go with Aboriginal beliefs and what they've left behind - taking that a lot more seriously than ... (it did) say when I was a teenager.

One participant considered the input provided by the Murana staff very valuable.

The bushcare group is a joint thing between National Parks and Maruna... and (we'd) learn about connection to country, or someone might share a story with you that their grandmother told them or something like that, so you know it was still a very Aboriginal environment and place even though none of us were scientists or anything.

Another appreciated input from the range of groups participating.

I mainly rely on all the groups - Rural Fire Services; local bushcare groups; National Parks and Wild Life staff and from environmental scientists advising us. These are the people you listen to, and locals and other experts who have been in bush care for many years and have a career in that and are working in this place so they can give me a lot of advice.

E. VISION

Most participants wanted outcomes that included a healthy ecosystem (good bush), supporting a large diversity of plant and animal life, and for people to continue to work together and be proud of their work.

I cannot picture how the Nepean River looked 250 years ago... I'd like to see something come back as close as possible to that.

Many participants saw it as a long-term program 'with no end'

I see that it is a lifetime plan that will just continue generation after generation to look after and have no end. You don't have a five or ten-year plan - it's a plan that doesn't stop.

In ten years time ... I'd like to see more of the country represent its former native appearance. ... I'd like to ensure that whatever effort has been put in there that we can protect it into the long-term.

In five to ten years I would like to see that place as weed free as it can be, with vegetation and animal communities that should be there, and healthy, and complement one another... I'd like to see Aboriginal community members working out there and being involved and having cultural meetings and having involvement in how it is looked after.

Several participants see a place that is visited by many people, some calling for appropriate management to ensure respect for country.

I'd like to see it free of (weeds). I'd like see the area actually being used by more people... only an hour's drive out of Sydney and you can camp in the bush and have birds and wildlife around you, it's pretty amazing.

It would be great to have a camping area here, but because it is now an Aboriginal place we have to be careful how we do that. Some of the projects I've run in the past have been schools projects... here you (could) start paddling down here, do some weeding here, and then camp overnight, paddle down to Clark Island or a bit further down the river and camp etc. So you could do those Duke of Edinburgh trips where they paddle along the river and camp on either on Park or on crown land all the way down.

I would like to see it as a renewed cultural landscape that is healthy and thriving with local wildlife. I see Aboriginal and non-Aboriginal people coming to visit it as an example of how we can heal country and exchanging culture through story, song, dance and simply being there. There is room for other uses such as mountain biking and even horse riding so long as there is respect for Country and that these activities are managed in a way where conflicting use is avoided.

I'm obviously happy to follow the vision of the past guys - Darug and the traditional owners. It would be really great to remember that we are right on the banks of the river. .. the carp is still a massive problem and it's been silted up and trashed and used and abused and profiteered from.... and everyone makes lots of money except for the Aboriginal owners who are trying to get the message out there that it has to be taken care of or it won't keep supplying for us.

One Aboriginal participant detailed their vision for positive impact across species on the site.

I'd like to see people coming there possibly more regularly; and maybe some people resourced to facilitate that engagement between the people and that country. And see the response of that country to that work: see healthier relationships, kinship relationships - so seeing the younger generations of trees coming through with a parent trees nurturing them; see weeds decline; see increased populations of small mammals and arboreal mammals, kangaroos and stuff; potentially some other restoration work, which might be going beyond fire, around managing some of the degradation of the landforms there like some of the erosion there, and things like that. (I think some fire management could have a role in that but we probably need some other work). And to basically just be able to come there (and enjoy) the decline of the unhealthy dynamics, and which are both native species and invasive species, and the increase of healthy relationships - where you've got native species that are fruiting flowering, the structure of the trees looks good, there's a new generation coming through, healthy grass - native grasses, yams and other species of significance.

This participant's vision included making use of the resources that come from caring for country.

I'd like to see people using those resources: picking lomandra to weave; picking yam daisies to put on the fire, and cooking them; people camping there people and people actually engaging! Not just doing burning for burning, but doing for outcome. So 'I looked after this country and country's healthy now, and I'm healthier for it. Now I'm going to have some of that bushtucker - maybe some kangaroo - put a kangaroo in a camp fire in a ground oven and cooking and have people laughing and having a good time and reflecting on the outcome. It's about 'healthy country - healthy people' and that relationship people have between that place. People may choose not to eat or hunt there - that's fine. But it's about what are they kind of giving and taking from that relationship with that country.

Darug participants also saw it as a place of learning about caring for country.

We need to have a campsite there - a place for fire, signage to educate people, more family place, a dance circle and camp place. A cultural centre would be great.

For the place to be a place of cultural learning - as it was in the past and continues to be.

I don't live by making a vision and going there... but I'd like it clean...(Regarding) all the leisure activities... I'd like people coming there for cultural reasons; for people to ask before they come on there; for us to be maintaining that place with fire. It's not saying that non-Aboriginal people couldn't go on to that place - but it would nice to have certain areas where we get to say who comes and goes on - which there is no area that we do that in... And then for that place to be used so that so people would come - it doesn't have to be Aboriginal people - I think there are areas that are appropriate - especially that farm area: that's the place for people to be on. But not on the handprint caves. It's be nice for us to take people to things, but not just as it stands where they have every right to be there whether we like it or not, so... yes, a well managed, healthy place.

Continue to apply for funding to run these groups at Yellomundee; establish cultural camps for youth/young adult groups to work and care for Country.

It's an Aboriginal Place and we need to show respect. We will lose more of what's there if we keep dumping dirt there for the bike tracks. We are advised about weeding and planting to prevent erosion, yet other activity is tearing up the place and causing erosion.

Management of the site to accommodate a range of users and the culturally sensitive site was important part of the vision of several participants.

We have a mountain bike track that runs through to be able to have big community events here and stuff, but to be able to work out so that there's no (problems) like... often we have mountain bikes racing around and sometimes horses might be scared by mountain bikes. We've got to really work out a plan in regards how we operate, where we have horse riders over here and mountain bike riders over there, and a real understanding and plan for how to work, because at the moment it is a bit haphazard...People are coming in from across some private land... they're not really supposed to.

One participant hoped that within five or ten years time the *Yellomundee plant communities have an appropriate fire included in their overall management of bio-diversity on those areas.* This participant's vision included *non-indigenous and the indigenous crossover* in understanding the ecology of the site.

I think that the cultural development that's required, in terms of gaining knowledge around fire and the use of fire (anywhere, but specifically here), has to come from connections with elders where possible, where that knowledge is known to be held. And if it's not there then it has to come back (using) any evidence that we can find around history, archeological digging etc, etc. This then it has to work in with the understanding of the ecological processes that go on within that area to maintain a healthy vibrant area.

One participant sees the project as part of a revolutionary movement.

I know these kinds of things are happening all over the place at the moment on a very small scale ... bringing a whole range of people together with the will...to learn from the devastating mistakes of the past and to actively do a lot better... I think that it will be remembered one day as being as important as the land rights movement or the civil rights movements in the '60s, in terms of indigenous and non-indigenous relations.

Is there one thing that is most important to you about this cultural practice?

Many participants simply stated that connection to country and connection to people are most important to them, with several including healing people and healing country.

Probably connecting people. A lot of us don't have the opportunity to meet people of Aboriginal descent and it is good to meet and work with them. Also the other bushcare groups, the bass fishermen that come here, and you sort of build up a community - we're all trying to improve this area, and improve the cultural practice, and the coming together of the different groups. So it is good.

Several just want the program to keep going - Keep it going. We're on the right track. It if doesn't work let's see what we can do to perhaps make it work. The longevity of the project was the most important concern of several:

That the people who are engaged today are (still) engaged in two to three or five years time, so that people don't come in and experience cultural burning and then drift away

and pursue another interest.

One participant explained the difference made to the bushcare on the site by the introduction of cultural burning. They explained that the bushcare was becoming dominated by paid workers, with volunteers dropping off, and was in need of a sense of 'community'.

They were having long conversations, like - 'well this isn't quite working, if it was working there would be a community here'. But then we got permission to invite Victor down to teach us Firesticks - and it just worked so well, it rejuvenated everything. People came out and camped. The fire is good because it brings the kids in and people in who are turned on by slashing lantana all day - that's pretty boring work, but it is satisfying. It takes a fair bit of commitment to coming back month after month to pull out your African lovegrass and the lantana. So part of what Firesticks has done is to... make it more attractive and bring in more people.

For some participants the environmental repair was key.

Undoing the damage that we've caused, which is the weeds, and then there's the re-planting with the natives, and seeing those little locals coming up and growing and putting their little roots down. It is all part of the one big cycle.

For one participant the important thing is that it allows families to do stuff together.

At the last couple of burns I actually haven't looked at the fire I've looked at the people. I just love watching the mum and dad and child together. It is just great.

Aboriginal cultural leadership was considered most important by one participant.

That it is a culturally led, empowering process that maintains cultural authority and supports cultural practice... I want to see people burning their country because it's their responsibility and it's their role, and see and other people supporting that.

Several participants considered the project involves so many interlocking factors that it is impossible to single any one out. Participants also considered it important *that we get people on country.*

Education for these younger generations (so) there are still people who want to do this.

For non-Aboriginal people to also be involved in care, not just as users, but because they should. It is not just about being a user - I see people who use the area but don't care enough to contribute to it.

For one participant the project is important because of its potential to bring together indigenous and non-indigenous knowledge in trying to understand and support the bio-diversity needs, and the vegetation and the animal relationships, on that site, which walks hand-in-hand with the cultural development.

Another considers the most important thing is that the project grow and connect:

That it connect across the country to the other places that are doing it, and that it will be supported (so it can) thoroughly transform, not only the way that conservation management is done but the way that the Australian community at large understands the country that they live in. I think this is really important for that.

F. ACTION NEEDED

Many participants saw the need for the development of an action plan, incorporating a wide range of possible activities.

A plan or strategy that will support a shared understanding of what cultural burning can do for the country and a shared (commitment that) we are prepared to stay and support the programme into the long-term.

An action plan to have more young people involved, maybe school groups.

Determine the vision and decide what areas are to look like in the future. Bring stakeholders together to discuss. Work out how to get there incorporating cultural burns, bush regeneration etc. into the process.

At the moment, because it has just been declared as an Aboriginal Place, we're going through this process which is sort of like a legal document... so I guess that's got to happen so the Aboriginal Heritage Impact Permit (can) allow us, and friends, to be able to continue to do it. And then (we need) a bit more of a master plan on how we do things rather than turning up on the day and thinking — oh, we'll work over there — (although it's also) good to have that freedom because it may have rained over the week and it's a bit damp down there so we'll work up here. So it is still good for it to be flexible and organic.

They need to have a plan of management with the Darug people who are involved in that whole area anyway because it is an Aboriginal Place. I'm not a Darug person - it's not my place to advise here.

Come up with a strategic fire plan which identifies some focus areas - particularly on Parks policy. The Yellomundee group can't drive that process: they can come up with an internal kind of policy, but the broader (Parks) policy framework they will probably have to feed into.

It would be good to have a better master plan on how we do things so that everyone understands what's going on.

Many expressed the need to support ongoing and long term care for country at the site.

The Yellomundee site should continue to have cultural burning on it in perpetuity as a learning place, as a place to bring people, to learn to share that understanding about how you can build these kinds of projects and engage in a broader community to actually achieve those kinds of outcomes.

Several also called for opportunities to air divergent views and come to an understanding in planning for the site.

I get a sense that, because it's been a bit of a melting pot and there's been a lot of dynamics, there is some divergence around different ideas that people have. And what I would say is that's a good thing. Let's actually bring that out in a respectful and a safe way and get people to think about that so they actually can learn from each other. Because the worst thing to do is to suppress that stuff - that's where we are now, where we've suppressed people's identity and their cultural and their values. We haven't given people the opportunity to grow and understand that obviously, the main part of where they coming from and their ideas and knowledge is right, but there may be some opportunities on the edges to refine their thinking or refine their knowledge and to actually support other values - other people, other organisations, other countries' values. And so trying to provide a framework (for that to occur) is probably in the immediate timeframe. And I think that would (be part) of the planning process.

One participant believes there is a plan for managing the range of 'users' is needed.

They need to develop a good management program to keep all the users of the park happy. You're not going to keep everybody happy all the time; they need to find a happy medium. A lot of people use it, like horse riding, mountain bikes, fishermen, walkers, runners...It just needs to be shared and managed properly. It's just a matter of finding a common ground with all these groups. Some impact the area more than others.

Some participants recommended specific strategies, and funding was a feature in the actions recommended by many.

We need to have ongoing funding - so you don't start a program, and then you have to walk away and lose whatever you've gained, and more perhaps. We need people with the time to get organised and talk to the community. So over the next year I think it's about funding ... so we have a good outcome in five or ten years.

It would be good to have... contractors there doing some works, particularly some of the really bad areas of lantana, worked on a bit more than what volunteers can do once a month. Every time we talk Parks, it's always funding. More money!

More government funding and community collaboration.

Immediately: more funding for weed control. Longer term: more funding for weed control.

It has got to be made attractive to the public and it needs the money. Someone's got to have a budget so it can be done. Parks run on charity.

Immediately: complete this Review and get 'those' that need to know to read this Review. For the next year: continue the project with follow-up burns, and continue monitoring and recording results. Over the next 5 years: Expand the program based on the successful trials of burns being done now. We need continued resourcing to ensure management of the project is supported through Bushcare and Firesticks, and other programs such as Green Army and Local Aboriginal Land Council etc.

Do some of those knowledge-gap workshops, or 'on-country' kind of planning to work out a short-term plan in the next year or two. Continue to keep running the workshops and keep trying to gain research resources to support that process. Allocate more resources to do cultural ecological monitoring and survey work.

The latter participant also recommended that the project scope the broader cultural landscape.

Identify that pathway which the site might sit within, and maybe identify some other sites - probably up into the mountains and down into the plain, maybe along the river, and then maybe some other sites... start orientating that site in a broader cultural landscape and thinking about its role in that functional cultural landscape. So you can still focus on Yellomundee but you're sort of seeing that linkage between other parts of the landscape.

And then long term I guess it's about actually using the Yellomundee - and maybe some other projects' experience - to set up other projects in that broader a cultural landscape to support other landholders, other Aboriginal groups or other country where that needs to occur as well.

Darug participants

We need **what** we need to just do it: access to little plants - gum trees and that - to put in where we weed. We need to push through - like getting rid of the privet - and (not excessively) worrying about erosion when the mountain bikes are causing it and they dump dirt in for them... we need a bit of balance here. We need to push past the barriers to making an impact. We need a bit more autonomy - a level playing field.

A range of actions was recommended by one Darug participant:

- 1. An employment strategy for local Darug and other indigenous people in community partnership with NPWS, Olly, (Oliver Costello) Firesticks and the local regeneration group;
- 2. The place becomes a place of learning like it always was;
- 3. It becomes a place for ongoing best practice;
- 4. There is a presence of the Darug on site showing continuing connection to country... a place where elders and others can stay. From that time others can come and stay and branch out and learn for their place.
- 5. We hold a festival to acknowledge and showcase the brilliant work such a credit to the bushcare regenerators who have been working on that country, giving their time all the time.

Another Darug participant called for a greater sense of security that this significant Aboriginal Place would be appropriately cared for

We need to have worked out some sort of plan that gives people security - look, we try to be all inclusive and that, but it would (be good) for Aboriginal people to feel secure that those sites that they care about so much are looked after - at the moment we don't have that security...it would be a nice gesture for the land owners (or the assumed land owners which is National Parks in this case) to make sure that we feel that these sites are respectfully looked after. And they're not at the moment because no one is out there looking after them... I'm not saying 'gate the whole thing off' - you can't gate it off . So you've got to have people there. As I try to explain to people

(especially to National Parks because they have a responsibility to look after country) 'you're missing a big species there - a very important one, and that's us! There's no use having a park there without people in it'.

Traditional owners have a strong responsibility to country as a living entity. We can be there so that people camping can learn that they're on a special place

In a religious sense - it's a religious understanding. I need to stress that this is our 'church'. For too long people come in to desecrate it. It needs to be understood - like we would not put graffiti on a church alter. We want the sort of respect maintained for this place as is to a church.

We need more family there. And we need to have a campsite there - a place for fire, signage to educate people, more family place, a dance circle and camp place. A cultural centre would be great.

What is needed to achieve this?

People

Almost all participants acknowledged that people are central to the program and several noted that at times there are enough people to do the work. Some thought more people could to broaden the range of knowledge and expertise. One called for more people who would 'get in and pull weeds and not just talk about it'. Several identified the need to engage more Aboriginal people and traditional owners. Two called for an Aboriginal person to reside on site in order for Aboriginal people to know that the place is being cared for appropriately. One participant remarked

As this experiment keeps going and keeps drawing people in and keeps sending ripples out through the various communities that it brings together, it will gather strength.

Expertise/knowledge

Some participants felt that the knowledge needed was already held by various participants and that this was being freely shared, but that time working on country is what is needed rather than knowledge from other sources. A wide range of views are held.

We've probably got half as much expertise and knowledge as we really need to do it well - but we've got half of it! We'll probably need to expand on that knowledge and expertise.

Some of the knowledge gaps are ecological or cultural knowledge gaps, and some of them are probably policy regulation gaps. (It would be good) if we can come up with a strategic fire plan which identifies some focus areas, particularly on park policy. The Yellomundee group can't drive that process: they can come up with an internal kind of policy, but the broader policy framework they will probably have to feed into.

(More knowledge could come from) traditional people, in collaboration with Darug community; and we need science to back up what is going on here, but working in partnership.

Not so much expertise but knowledge - we need to gain knowledge.

The need for people to have access to specific knowledge and expertise was identified by some participants

Identify the plants on the day - somebody to point what plant is to be attacked that day, and answer questions eg 'what about this plant' and explain the strategy.

I think the expertise to make sure the activities are safe; explain and to assist in monitoring what's going on and that expertise to say - 'this is not going in the direction that we want. We need to modify over here' - so the idea is not people jumping in blindly doing things and not having a discussion, or not seeking any advice about what's going on.

(The skills) to manage people, and access and talk to all the user groups. We need people with the time to get things organised and talk to the community.

We need to know what expertise people bring - so we can help each other to work out the gaps. It's all about exchange.

The expertise and knowledge associated with cultural burning was seen by one participant to be of importance both at the site and beyond.

(Cultural burning) can be a key that unlocks a door that will allow all of us to develop and work better at fire management and landscape rehabilitation.

One participant considered that both knowledge sharing, and planning with a common purpose, would be best achieved by an overnight camp, such as the one which occurred at the commencement of Firesticks.

When we launched fire sticks when Victor was here teaching us it was a full long weekend. (We need) more of these sorts of camps where we can get to know each other because everybody in the group has heaps of knowledge...It doesn't have to be that you just have one paid specialist - it has to be that the group itself is well resourced and that the elders or speakers are properly remunerated; but also that there's enough time for people to absorb, and reflect on, and talk with each other about what they're learning...

(We need) for everybody to have the time to sit round the fire and feed, and to talk about what they've learnt and how they've learnt it. Because then you've got a much stronger consensus among the group about what we're trying to achieve and what we're doing. It's round the fire that you get to toss those ideas around and get a stronger sense of how each person has absorbed and is learning... I don't see being out under a tree all that different to standing in front of a whiteboard. You're watching, and you're doing all that scientific learning, and looking at the smoke... (Afterwards, at night,) you've got stars and bird noises and you can just be that little bit more reflective... So you are just processing what you've learned.

His (Victor's) whole philosophy around fire is so interesting and makes so much sense. Fire is the original technology for humankind...That's all ancient knowledge that's been passed down, and as we know – scientists keep discovering and going 'wow that's amazing'. Aboriginal people know what they're talking about. People don't survive 40,000 years on a continent this size with that number of people to manage the whole place with all those deadly animals – a huge landscape, of course. They know what they're talking about. They're incredible scientists, how else would

they have the oldest continuous living culture? ... Scientists are discovering that Aboriginal stories are completely accurate accounts of natural events that we understand through scientific methods which is observation and hypothesis and results anyway.

Strategy

Several participants assumed there is a master plan for project, and others called for a master plan.

It takes strategy: it would be good to have a better master plan on how we do things so that everyone understands what's going on.

Another stated *presumably NPWS would lead that, and manage range of access and users.* One participant emphasised the need for strategy to be developed in *collaboration with the Darug community*. Another urged collaborative management of the process.

The approach needs a level playing field of modern/old ways, not just, say, one boss. There are people who can bring different things - like Den - who works with National Parks and has traditional knowledge, then there's Clive at Katoomba - he has knowledge about the plants, and Dan Chalker is a fire expert but he also has traditional knowledge...

One participant saw strategy development will need to occur within the reality that Firesticks operates in a regulated environment.

Some of the knowledge gaps are ecological or cultural knowledge gaps, and some of them are probably policy regulation gaps. (It would be good) if we can come up with a strategic fire plan which identifies some focus areas, particularly on park policy. The Yellomundee group can't drive that process: they can come up with an internal kind of policy, but the broader policy framework they will probably have to feed into.

Some participants outlined possible steps involved in developing strategy for Firesticks. Several consider that strategy needs to follow a facilitated process around the intent of why people are engaged what they want to achieve.

Firstly we need to know what we want for the landscape. We then need to understand the impact of burn frequency on this particular site. We need to plan burn areas and importantly the follow up on those burns in terms of bush regeneration. Ecologists and cultural burners need to come together to understand the impacts and then desired outcomes for areas can then determine what areas to burn and how frequently.

One suggested benchmarking progress towards objectives:

(We need) some sort of pathway so that next year the bushland is better off than it is today. I think over the last five years that Shaws Creek is 15% better than it was in 2008 because of the effort of the volunteers' bush regenerative efforts. I would like to think that cultural burning is a contributor to improving the landscape over the next five years, so in five years time (we have improved, say) 30% of the landscape. I think we need a little more strategy about what we're able to achieve.

Several participants throughout the survey referred to the challenge presented by the need to bring people to the place when the weather is right to burn, particularly when this requires permissions and such a range of stakeholders. One participant called for strategy to attempt to manage these factors, and considered that (we need a) *very clear sets of days on country to help drive this process*.

One participant thought that a strategy would arise from the management plan required for the Aboriginal Place. One felt there needs to be a strategy to put in place *security for Aboriginal people to know site is cared for.*

One commented that the people leading this deserve more recognition for what they doing and they need help. Another commented that National Parks people are already doing a good job.

What they've done here now just with this shelter and toilets and so on... we didn't expect this to be here as quick as it has happened so National Parks has knocked this area into shape quite well, when you consider there was an old house here full of asbestos and they cleaned that all up and built this shelter and toilets. They'll get a lot of positive feedback from people who use it.

Timing

One participant remarked that *country will show itself to lead the right timing for burns*. Several people remarked upon the challenge of planning and communication when a range of people and groups need to be there simultaneously, with suitable natural conditions, and tying in with bushcare activities. Permissions and associated 'red tape' add to the complexity

Less hoops to be jumped through to actually get it to happen each month (would be good).

It is always on tenterhooks whether it is going to happen or not - you know, with weather and things. If it blows up really windy on the day then of course it has to be stopped.

In order to maintain momentum, one participant urged a very clear sets of days on country to help drive this process.

Policy

Divergent views were expressed by participants regarding the policy and regulation surrounding the project. For some there is no problem. *To me the guidelines seem quite clear and good.* Others consider the project over-regulated.

I think that policy and regulations need to be totally reviewed - the paperwork! It costs a lot of money to be able to get to burn. That money should be spent on the ground and not on a piece of paper to get the opportunity to do this. I know you need regulations (but we need to reduce) the time it takes to get permission.

(At the moment) policy and regulation gets in the way and stops people from doing things sometimes. (When considering) whether cultural burning is a safe practice and how it matches into their fire management policies, if you've got the skill-sets within the Aboriginal community then they're the people who should help form the policy and (work out) how we 'tick those boxes' for risk management. It's already happening - if there's risk they don't burn.

This respondent was aware of a relevant precedent where weed management required skills in whitewater rafting and these services were outsourced in a way that complied with appropriate risk management.

Where there was a willingness, experienced people within Parks developed the policies that they needed to manage the risks. You can do the same thing here.

Another participant saw the involvement of Aboriginal people within the regulatory organisations as an investment in 'legitimation' of cultural burning.

The Aboriginal people who are Yellomundee Firesticks participants should be trained at a base level to work under the current burning guidelines and implement the guidelines with a view to offering higher level training to manage fire. This is needed for cultural burning to be legitimated over time and integrated into fire service practice. Traditional practitioners need to move within the organisations that control fire in the area today.

Greater collaboration between National Parks and the traditional owners in planning for the site was encouraged.

They need to have a plan of management with the Durag people who are involved that whole area anyway because it is an Aboriginal Place. I'm not a Darug person - it's not my place to advise here.

One respondent explained the complex policy landscape in which the project sits.

The policy and the regulations - in an urban part of Sydney - (there are) responsibilities under the work & safety Act, for people living next to Yellomundee, and (there's also) responsibility for the other users of Yellomundee. So (for example) 'how does this activity relate to ther mountain bike activities? How does this activity relate to the bush care group?' There has been a bushcare group devoted for five to ten years - 'how does this actually work hand-in-hand with that activity?'

This participant explained that funding accountability within the collaborating agencies means that there is policy around it to ensure that the activity is consistent with good expenditure of funds. The participant urged that the project put in place the objectives, structure and organisation to ensure that it achieves its outcomes and avoids a more negative impact in the longer term, or people feeling shamed or fewer feeling engaged.

One participant emphasised the challenge, and the importance, of getting the framework right for cultural burning to succeed.

The thing about cultural burning (at Yellomundee) that has been a blessing is that it is allowing Aboriginal people to come into country and start to find their way around burning. One of the blockages here is that the framework for fire management in NSW (if not Australia) hinders that development (elsewhere). If you're a non-indigenous person trying to do what this program is allowing cultural people to do, then you would never get anywhere. And I think that whole idea for me - my interpretation of this - is that this can be a key that unlocks a door that will allow all of us to develop, and work better at fire management and landscape rehabilitation.

Materials & Other resources

Participants called for the project to be supported by all stakeholders

Support for the project from Government, Land and Bushfire Management agencies, NGO's and most importantly, community.

The people leading this deserve more recognition for what they doing and they need help.

Several respondents stated that the project should have a budget

The government needs to step in and probably throw a few dollars at it, or people - workers and so on - there's been great progress already with the toilets and so on. Need a lot of other materials to create roads and tracks and so on through the park.

We need money for a budget. If people are volunteering their time it maybe just to ensure that we can cater for them. I think there needs to be a reward or a celebration or at least logistical support. I don't think volunteers should be also using their own resources.

So I guess if I was prioritising I probably say strategy, and then underneath strategy is probably expertise, knowledge, policy regulation and then the materials and other resources would probably come in underneath that because at the moment they've got some, but they're going to need more.

Comments

What's happening down there (and elsewhere NSW) I just think that between all this only good can come of it for Aboriginal people and it can put pride back into for some young people - to get them back doing this, and see things a little bit differently.

Just keeping an open mind I think because I don't think any one person has the answers, and the journey is that we learn together. I think that's how the old people always operated, like working together, which is the ideal.

I want to say that I'm thoroughly enjoying it in the short time that I've been there and I'll continue to go when I can unless things change and maybe I can't, but I can certainly participate quite a lot.

You know the story told by Kate Grenville in The Secret River ... this is in the consciousness of people who read it or who are watching it: the Darug copped it, the earliest and the worst because ... of that frontier cowboy do-what-you-like disregard for law and order mentality that was out here, which was a little bit less in Sydney Cove where the governor was.

I'd like to acknowledge and thank Michael Jackson for sharing a Gundungurra learning story with myself, and also Alfred Fazldeen for sharing a Barkindji learning story with myself. I am not going to go into too much detail in the stories but they both have a theme of fire in them. In the stories an animal keeps fire and uses that fire to look after itself and doesn't share with the others. In time the other animals see that this animal has something, and they become curious and suspicious and plot plan to get the fire off the animal to help look after everyone; and in doing this the fire escapes and burns the landscape and animals to different degrees and changes them. Some of the main things that I take from these stories are that if you take fire, and don't share and teach everyone how to use fire for good, and look after each other and the landscape, it will become bad and everyone and everything will be effected in a bad way and change the way that things are.