



#### NAME BUSHCARE ACTION PLAN REVIEW

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#### **CONTACT INFORMATION**

Group Name: Moeyan Hill Bushcare Group

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Email: david.kraus@iinet.net.au Reserve Name: Moeyan Hill Reserve Number: NCO002

Land Tenure: Shoalhaven City Council Comm. Land Type: Natural Area –

Bushland

### 1. BUSHCARE GROUP GOALS

The aim of the Moeyan Will Bushcare Site action is as follows:

- 1. Maintain and improve the reserve's biodiversity
- 2. Protect the conservation values of the reserve
- 3. Regenerate and undertake weed control that will achieve the above two aims
- 4. Work in line with the objectives and recommendations of the draft Moeyan Hill Vegetation Management Plan 1998
- **5.** Foster further community stewardship and involvement in the Bushcare group, management and use of the reserve.
- **6.** Acknowledge the Moeyan Hill Reserve landscape connectivity values, as part of the Berry Landscape Conservation Area, as per the Register of the N.S.W National Trust.
- 7. Inclusion of the Moeyan Hill reserve into the Berry Corridor activities.

## 2. BUSHCARE GROUP ACHEIVEMENTS TO DATE – (What successes has your Bushcare Group achieved in relation to your achieving the goals and actions in your current Bushcare Group Action Plan and what lessons or new skills/knowledge have you learnt from these achievements?)

Successes/Goals/Actions achieved to date	Lessons learnt
Regeneration and control of environmental and noxious weeds across 32 hectares of remnant native vegetation at Moeyan Hill Reserve	The Moeyan Hill Bushcare Group has not been able to achieve this action without entering into partnerships with other organisations and government bodies, via the sourcing of grant funds and cooperation of adjacent landholders.
Regeneration of 43,491 square metres of Illawarra Sub Tropical Rainforest, which is listed as an Endangered Ecological Community under the NSW Threatened Species Conservation Act 1995	As these vegetation types are located on richer alluvial soils and in moisture micro-climatesthe rate of secondary weed invasion has been high and Council and the Bushcare Group have needed to be vigilant with their follow up weed control.
On-going involvement of adjoining private landholders in the activities of the Moeyan Hill Bushcare Group. This has built on the capacity of these landholders to undertake bush regeneration projects on their properties by way of increasing their skills and knowledge.	The involvement of adjoining landholders directly in the Moeyan Hill Bushcare Group has increased the local community's awareness of local biodiversity values and provided landholders with a local social network to meet other landholders and improve social capital.
The success of the regeneration project at the Moeyan Hill has also inspired adjoining property owners to start bush regeneration project on their own land. Because they can see the visible change in the bushland condition within the Moeyan Hill reserve.	It has also improved new landholders knowledge and skills in pest animals and plant management and bush regeneration on their properties.
The Bushcare Group has lead 5 senior's walks, since 2009, through the Moeyan Hill reserve, which has broadened the awareness locally of the reserves environmental values.	Raised the local profile of the work the Moeyan Hill Bushcare Group.
Establishment and on-going monitoring of the bush regeneration project	The on-going monitoring project has been fairly spasmodic over the last 10 years since the project started. More effort and resources need to be allocated to train Bushcare volunteers to undertake monitoring.
Successfully awarded \$28,000 grant from Southern Rivers CMA	NA

## 3. SHOALHAVEN BUSHCARE GROUP ACTIVITIES TABLE (to be in conjunction with attached site map) NOTE: Priority should be rated as H = High (within 12 months); M = Medium (1-3 years); L = Low

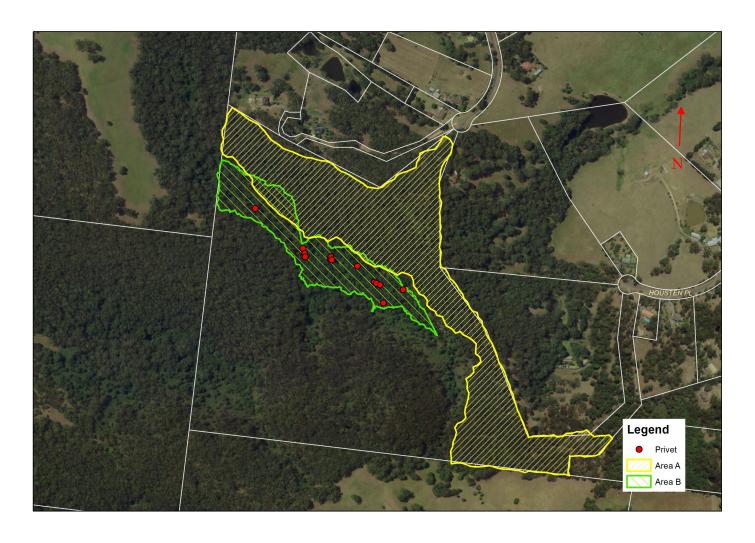
GROUP ACTION (these should relate to your project description)	PRIORITY	METHOD	TIME
Area A (See plans map for details)			
Existing and Current Actions		Existing and Current Actions	
<ol> <li>Bushcare Group and Council to continue the on-going control of noxious and environmental pest plants across the area, focusing on the following priority weed species:         <ul> <li>a. Lantana camara (Lantana)</li> <li>b. Delairea odorata (Cape Ivy)</li> <li>c. Solanum maritianum (Wild Tree Tabacco)</li> <li>d. Lillium formosum (Formosan Lily)</li> <li>e. Asparagus aethiopicus (Asparagus Fern)</li> <li>f. Passiflora edulis (Passion fruit)</li> <li>g. Passiflora mollissma (Banana Passionfruit)</li> <li>h. Ipomea cairica (Mil-a-Minute)</li> </ul> </li> </ol>	1. H	Undertake a combination control techniques ranging from manual hand control, cut and paint/scrape and paint in areas of light density weed cover. In areas with higher density weed cover chemical control will be required such as Splatter Gun or high volume spray (such as the old quarry)	1. As requir ed
<ul><li>i. Sporobulus africanus (Parramatta Grass)</li><li>2. Continue to undertake monitoring on the established</li></ul>	2. H	Council staff to assist	2. Once
quadrats to obtain quantitative data to measure the changes in vegetation composition and measure success of the regeneration project.	2	Bushcare Group with monitoring	a year
Continue to undertake guided walks through the reserve with interested groups and/or individuals		Bushcare Group to organise through Berry Landcare and local media	3. As requir ed
New Actions	4 54	New Actions	4 0040
Regenerate the old quarry site in the North-Western	1. M	Council to undertake initial	1. 2016

GROUP ACTION (these should relate to your project description)	PRIORITY	METHOD	TIME
part of area A via undertaking the following:  a. Spray the remaining Lantana camara using the Splatter Gun technique  b. Once the primary weed control has taken effect crush down the dead Lantana canes to mulch the area		spraying of Lantana and Bushcare Group to break down canes and revegetate using plans suggested revegetation list	
<ul> <li>c. Undertake revegetation of the quarry using locally sourced seed propagules</li> <li>d. Undertake follow up maintenance weed control</li> <li>e. Establish a 20m x 20m quadrat for undertaking monitoring to assess the success</li> <li>2. Undertake seed collection within the reserve to provide local seed source for future revegetation project within the Berry Corridors Conservation Area.</li> </ul>	2. M	2. Work with Berry Landcare and the Berry Public School Prop House to collect and propagate collected seed. Insure the NSW Florabank Guidelines are followed when undertaking collecting	2. 2016 to 2019
<ol> <li>Council to provide training to volunteers in vegetation monitoring so that the Bushcare Group can continue monitoring the regeneration success.</li> </ol>	3. H	Council and Bushcare     Group to organise a bush     regeneration monitoring	3. 2016
Explore the possibilities of installing motion sensor camera to monitor wildlife numbers and behaviours in the reserve	4. L	field day 4. Work with GER "Whose Living on My Land" project and Berry Landcare to coordinate the installation and training in sensor motion cameras	4. 2016 to 2025
Area B (See plans map for details)			
Existing and Current Actions 1. Bushcare Group and Council to continue with the on-	1. H	Existing and Current Actions  1. Use a combination of	1. As

GROUP ACTION (these should relate to your project description)	et PRIORITY METHOD		TIME	
going control of noxious and environmental pest plants, focusing on the following priority weed species:  a. Lantana camara (Lantana)  b. Ligustrum lucidum (Large Leaf Privet)  c. Senna pendula spp. glabrata (Cassia)  d. Solanum maritianum (Wild Tree Tabacco)  e. Zantedeschia aethiopica (Arum Lily)  f. Delairea odorata (Cape Ivy)  2. Re-establish the 20m x 20m quadrat vegetation monitoring plot and continue to undertake monitoring to provide quantitative data to measure the success of the regeneration project	2. H	manual chemical control such as hand puling, cut and paint and drill and inject depending on weed distribution and density. Some areas may require spot spraying with herbicide 2. Shoalhaven Bushcare Coordinator to assist Bushcare Group to reestablish quadrat and provide training in monitoring.	requir ed 2. 2016	
<ol> <li>Undertake seed collection within the reserve to provide local seed source for future revegetation project within the Berry Corridors Conservation Area.</li> <li>Council to provide training to volunteers in vegetation monitoring so that the Bushcare Group can continue to monitoring the regeneration success.</li> <li>Explore the possibilities of installing motion sensor camera to monitor wildlife numbers and behaviours in the reserve</li> </ol>	1. M 2. H 3. L	<ol> <li>Work with Berry Landcare and the Berry Public School Prop House to collect and propagate collected seed. Insure the NSW Florabank Guidelines are followed when undertaking collecting</li> <li>Council and Bushcare Group to organise a bush regeneration monitoring field day</li> <li>Work with GER "Whose Living on My Land" project and Berry Landcare to coordinate the installation and training in</li> </ol>	1. 2016 - 2019 2. As requir ed 3. 2016 - 2025	

GROUP ACTION (these should relate to your project description)	PRIORITY	METHOD	TIME
		sensor motion cameras	
Partnerships with surround Landholders and others			
New Actions			
Work with Berry Landcare and other partners in the NSW Environmental Trust – Berry Corridors Stepping Stone Bush Connect grant funded project to undertake pest animal and plant control on Moeyan Hill reserve as part of a cooperative approach biodiversity	1. H	Ensure Council staff and     Bushcare Group members are     part of the project's working     party.	1. 2016 to 2025
conservation across the Berry Corridors project area.  2. Hold a field-day in cooperation with Berry Landcare to demonstrate the bush regeneration techniques used and results at Moeyan Hill reserve.	2. M	Council, Bushcare Group and Berry Landcare to coordinate	2. 2016 /17

### 4. BUSHCARE GROUP ACTION PLAN MAP



#### 5. BUSHCARE GROUP WHS & EQUIPMENT REQUIREMENTS

Type of Activity	Yes	SWMS name included
Manual weed control (cut & paint, scrape and paint etc)	V	SWMS1276
Chemical control (spraying of herbicides)	V	SWMS1276
Planting	V	SWMS1265
Minor construction (walking track, fencing, outdoor furniture)		
Propagation & seed collection	V	SWMS1265
Education (school groups, field days etc)	V	NA
Other		

### 6. COUNCIL SUPPORT

Council provide the following support:

- Provision Tools, Equipment, PPE and Chemical
- Provision of Bushcare Field Officer for 11 sessions over 12 months
- Provision of mulch and plants within budget capacity
- Free green waste tipping fees of up to \$27 per month Assistance with technical advice
- Removal of larger debris Council employ staff to help in the removal of this debris
- Assistance with the provision with technical advice and training for monitoring
- Provision of 2 x staff for 4 days to assist with pest animal and plant control

7.	HAS A SITE FOR THE BU			ISK ASSESSMENT BEEN COMPLETED
	Yes	$\sqrt{}$	No	

### 8. LIST THE PERSONAL PROTECTION EQUIPMENT REQUIRED FOR VOLUNTEERS WHILST WORKING ON THE SITE

PPE Equipment Required	Date issued
First Aid Kit	Requires update
Gloves	Requires update

Sunscreen	Requires update
Insect repellent	Requires update

### 9. POSSIBLE FUTURE FUNDING

Project	Funding source
Partnership project to extend the bush regeneration project across tenure and into other areas of the Moeyan Hill Reserve	Various

### 10. PLAN WILL BE REVIEWED EVERY THREE YEARS

**Next review due:** 

24/05/2019

### 11. PLEASE LIST OTHER LOCAL OR REGIONAL MANAGEMENT PLANS OR STRATEGIES THAT THIS PLAN RELATES TO

Name of document	Year it was produced	Produced by
Generic Plan of Management for Community Land – Natural Areas	2001	Shoalhaven City Council
Moeyan Hill Remnant Vegetation Management Plan	1998	Shoalhaven City Council
South East Local Land Services Strategic Plan	2016	South East Local Land Services

### 12. BUSHCARE SITE RECOMMENDED PLANTING/REVEGETATION SPECIES LIST

OVERSTOREY TREES		
Botanical	Common	
Acacia mearnsii	Black Wattle	
Acmena smithii	Lilli Pilli	
Alphitonia excelsa	Red Ash	
Angophora floribunda	Rough-barked Angophora	
Baloghia inophylla	Brush Bloodwood	
Brachychiton acerifolius	Illawarra Flame Tree	
Brachychiton populneus	Kurrajong	
Callistemon salignus	Willow Bottlebrush	
Cassine australis	Red Fruited Olive Plumb	
Corymbia maculata	Spotted Gum	
Dendrocnide excelsa	Giant Stinging Tree	
Doryphora sassafras	Sassafras	
Ehretia acuminata	Koda	
Eucalyptus botryoides	Bangalay Gum	
Eucalyptus paniculata	Grey Ironbark	
Eucalyptus pilularis	Blackbutt	
Eucalyptus saligna	Sydney Blue Gum	
Eucalyptus tereticornis	Forest Red Gum	
Ficus obliqua	Small Leaf Fig	
Melaleuca styphelioides	Prickly Paperbark	
Melia azedarach	White Cedar	
Syncarpia glomulifera	Turpentine	
Syzigium australe	Magenta Lily	
Toona australis	Red Cedar	
	SHRUBS	
Botanical Common		
Acacia binervata	Two Veined Hickory	
Acacia maidenii	Maidens Blush	
Acronychia oblongifolia	Native Citrus	
Backhousia myrtifolia	Grey Myrtle	
Breynia oblongifolia	Native Breynia	
Callistemon salignus	Pink Tips	
Claoxylon australe	Brittlewood	
Clerodendrum tomentosum	Hairy Clerodendrum	
Diospyros australis	Black Plumb	
Indigofera australis	Indigofera	
Melaleuca styphelioides	Prickly Paperbark	
Myoporum acuminatum	Mangrove Boobialla	
Notalea longifolia	Mock Olive	
Rapanea variabilis	Muttonwood	
Santalum obtusifolium	Sandlewood	
Zieria smithii	Sandfly Zieria	
Cryptocarya glaucescens	Jackwood	
Cryptocarya microneura	Murrogum	

Diploglottis australis	Native Tamarind
Elaeocarpus kirtonii	White Quondong
Eupomatia laurina	Native Guava
Ficus coronata	Sandpaper Fig
Glochidion ferdinandi	Cheese Tree
Guioa semiglauca	Guoia
Livistona australis	Cabbage Palm Tree
Pisonia umbellifera	Birdlime Tree
Rhodamnia rubescens	Scrub Terpentine
Streblus brunonianus	Whalebone Tree
Synoum glandulosum	Bastard Rosewood
Alectryon subcerinus	Wild Quince
Diospyros pentamera	Myrtle Ebony
Melicope micrococca	Melicope
Notelaea venosa	Mock Olive
Homalanthus populifolius	Bleeding Heart
Ozothamnus diosmifolius	Paper Daisy
Olearia viscidula	Daisy Bush
Persoonia linearis	Narrow Leaf Geebung
Pittosporum revolutum	Rough Fruited Pittosporum
Pittosporum undulatum	Sweet Pittosporum
	asses, herbs, climbers)
Botanical	Common
Dichondra repens	Kidney Weed
Imperata cylindrica	Blady grass
Leucopogon juniperinus	Prickly Bearded Heath
Lomandra longifolia	Spiny-headed Matt-rush
Microlaena stipoides	Weeping Grass
Oplismenus aemulus	Australian Basket Grass
Oplismenus imbecillis	Creeping Beard Grass
Pittosporum multiflorum	Orange Thorn
Poa labillardierei	Tussock Grass
Clematis glycinoides	Old Man's Beard
Glycine microphylla	Love Creeper
Kennedia rubicunda	Dusky Coral Pea
Marsdenia rostrata	Milk Vine
Pandorea pandorana	Wonga Wonga Vine
Aphanopetalum resinosum	Gum Vine
Sarcopetalum harveyanum	Pearl Vine

## 13. BUSHCARE SITE WEED LIST (The following weeds have been recorded on the site)

Noxious	Environmental	Control Method
Lantana camara (Lantana)		Chemical or manual control
Sporobulus africanus (Parramatta Grass)		Chemical or manual control
,	Araujia sericifera (Moth Vine)	Manual control (hand pull)
	Asparagus aethiopicus (Asparagus Fern)	Chemical of manual control
	Cinnamomum camphora (Camphor laurel)	Chemical or manual control
	Delairea odorata (Cape Ivy)	Chemical or manual control
	Grevillea robusta (Silky Oak)	Chemical or manual control
	<i>Ipomea cairica</i> (Mil-a-Minute)	Chemical or manual control
	Ligustrum lucidum (Large Leaf Privet)	Chemical of manual control
	Lilium formosanum (Formosan Lily)	Chemical or manual control
	Ligustrum sinense (Small Leaf Privet)	Chemical or manual control
	Passiflora edulis (Passion fruit)	Chemical or manual control
	Passiflora mollissma (Banana Passionfruit)	Chemical or manual control
	Senna pendula spp. glabrata (Cassia)	Chemical or manual control
	Solanum maritianum (Wild Tree Tabacco)	Chemical or manual control
	Zantedeschia aethiopica (Arum Lily)	Chemical or manual control

# 14. BUSHCARE SITE SPECIES LIST VEGETEATION TRANSECT 1 – RIDGE NEXT TO FIRE TRAIL (The following species have been recorded on the site using a randomly selected 50 metre transect)

OVERSTOREY TREES			
Botanical	Common		
Alphitonia excelsa	Red Ash		
Angophora floribunda	Rough-barked Angophora		
Eucalyptus bosistoana	Coast Grey Box		
Eucalyptus paniculata	Grey Ironbark		
Eucalyptus pilularis	Blackbutt		
Eucalyptus quadrangulata	White-Topped Box		
Eucalyptus saligna x botryoides			
Syncarpia glomulifera	Turpentine		
	SHRUBS		
Botanical	Common		
Acacia binervata	Two Veined Hickory		
Acacia maidenii	Maidens Blush		
Acacia mearnsii	Black Wattle		
Brachychiton populensis	Kurrajong		
Acronychia oblongifolia	Native Citrus		
Backhousia myrtifolia	Grey Myrtle		
Breynia oblongifolia	Native Breynia		
Callistemon salignus	Pink Tips		
Claoxylon australe	Brittlewood		
Clerodendrum tomentosum	Hairy Clerodendrum		
Diospyros australis	Black Plumb		
Exocarpus cupressiformis	Ballard Cherry		
Indigofera australis	Indigofera		
Persoonia longifolia	Narrow Leaf Geebung		
Melaleuca styphelioides	Prickly Paperbark		
Melia azedarach	White Cedar		
Myoporum acuminatum	Mangrove Boobialla		
Notelaea longifolia	Mock Olive		
Notelaea venosa	Mock Olive		
Olearia viscidula	Daisy Bushes		
Ozothamnus diosmifolius	Daisy Bush		
Persoonia linearis	Narrow Leaf Geebung		
Pittosporum revolutum	Rough Fruited Pittosporum		
Pittosporum undulatum	Native Daphne		
Rapanea variabilis	Muttonwood		
Santalum obtusifolium	Sandlewood		
Trema aspera	Native Peach		
Zieria smithii	Sandfly Zieria		
UNDERSTOREY (grasses, herbs, orchids)			
Botanical	Common		

Cynodon dactylon	Common Couch	
Dichelachne rara	Plume Grass	
Dichondra repens	Kidney Weed	
Imperata cylindrica	Blady grass	
Leucopogon juniperinus	Prickly Bearded Heath	
Lomandra longifolia	Spiny-headed Matt-rush	
Microlaena stipoides	Weeping Grass	
Oplismenus aemulus	Australian Basket Grass	
Oplismenus imbecillis	Creeping Beard Grass	
Pittosporum multiflorum	Orange Thorn	
Poa labillardierei	Tussock Grass	
UNDERSTOREY (vines & climbers)		
Botanical	Common	
Clematis glycinoides	Old Man's Beard	
Desmodium varians	Slender Tick-Trefoil	
	GIGHTIGHT THEIR THEIR	
Eustrephus latifolius	Wombat Berry	
Eustrephus latifolius Geitnoplesium cymosum		
Geitnoplesium cymosum Glycine microphylla	Wombat Berry	
Geitnoplesium cymosum	Wombat Berry Scrambling Lily	
Geitnoplesium cymosum Glycine microphylla	Wombat Berry Scrambling Lily Love Creeper	
Geitnoplesium cymosum Glycine microphylla Kennedia rubicunda	Wombat Berry Scrambling Lily Love Creeper Dusky Coral Pea	
Geitnoplesium cymosum Glycine microphylla Kennedia rubicunda Marsdenia rostrata	Wombat Berry Scrambling Lily Love Creeper Dusky Coral Pea Milk Vine	

# 15. BUSHCARE SITE SPECIES LIST VEGETEATION TRANSECT 2 – RAINFOREST GULLY (The following species have been recorded on the site using a randomly selected 50 metre transect)

OVERSTOREY TREES				
Botanical	Common			
Alphitonia excelsa	Red Ash			
Callistemon salignus	Pink Tips			
Cassine australis	Red Fruited Olive Plum			
Dendrocnide excelsa	Giant Stinging Tree			
Eucalyptus pilularis	Blackbutt			
Eucalyptus saligna x botryoides				
Melaleuca styphelioides	Prickly Paperbark			
	SHRUBS			
Botanical	Common			
Acacia mearnsii	Balck Wattle			
Acmena smithii	Lilli Pilli			
Acronychia oblongifolia	Native Citrus			
Brachychiton acerifolius	Illawarra Flame Tree			
Breynia oblongifolia	Native Coffee Bush			
Claoxylon australe	Brittlewood			
Clerodendrum tomentosum	Hairy Clerodendrum			
Cryptocarya glaucescens	Jackwood			
Cryptocarya microneura	Murrogum			
Diospyros pentamera	Myrtle Ebony			
Diospyros australis	Black Plumb			
Diploglottis australis	Native Tamarind			
Elaeocarpus kirtonii	White Quondong			
Eupomatia laurina	Native Guava			
Ficus coronata	Sandpaper Fig			
Ficus obliqua	Small Leaf Fig			
Glochidion ferdinandi	Cheese Tree			
Guioa semiglauca	Guoia			
Livistona australis	Cabbage Palm Tree			
Melia azedarach	White Cedar			
Melicope micrococca	Melicope			
Notelaea longifolia	Mock Olive			
Polyscias murrayi	Pencil Cedar			
Pisonia umbellifera	Birdlime Tree			
Psychotria loniceroides	Hairy Psychotria			
Rhodamnia rubescens	Scrub Terpentine			
Streblus brunonianus	Whalebone Tree			
Stenocarpus salignus	Scrub Beefwood			
Synoum glandulosum	Bastard Rosewood			
Toona ciliata	Red Cedar			
Wilkiea huegeliana	Veiny Wilkiea			

UNDERSTOREY (grasses, herbs, orchids)		
Botanical	Common	
Adiantum aethiopicum	Maiden Hair Fern	
Adiantum formosum	Giant Maiden Hair	
Blechnum cartilagineum	Gristle Fern	
Blechnum nutens	Gristle Fern	
Doodia aspera	Rasp Fern	
Gymnostachys anceps	Settlers Flax	
Hypolepis muelleri	Harsh Ground Fern	
Oplesminus aemulus	Australian Basket Grass	
Pittosporum multiflorum	Orange Thorn	
Plectranthus parviflorus	Cockspur Flower	
Polia crispata	Polia	
UNDERSTOREY (vines & climbers)		
Botanical	Common	
Aphanopetalum resinosum	Gum Vine	
Marsdenia rostrata	Milk Vine	
Parsonsia straminea	Monkey Rope Vine	
Sarcopetalum harveyanum	Pearl Vine	
Stephania japonica	Snake Vine	
Tylophora barbata	Forest Bindweed	

Appendix 1 – Map showing locations of 50 metres vegetation transects

