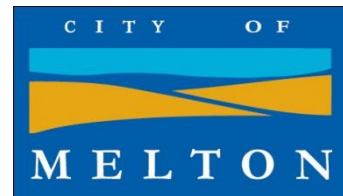


A Proud Community,
Growing Together



Melton City Council Gourlay Road Spiny Rice-Flower
Baseline Offset Report, March 2015.

**Cover Photograph: Burning of Mount Cotterell Spiny Rice Flower Offset Area
March 2013**

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1. Introduction

As part of the Commonwealth approvals process under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for the Gourlay Road duplication project within Caroline Springs, council was required to establish a Spiny Rice-flower offset area. This offset area has been established within Mount Cottrell Recreation Reserve, Mount Cottrell.

An Offset Management Plan (OMP) for the 3ha management area within Mount Cottrell Recreation Reserve was prepared by consultants (Biosis, 2013) and approved by the Commonwealth Environment Minister 12 December 2013. The requirements for monitoring and reporting on this offset are set out in Section 4; Monitoring and Reporting of the Approved OMP. This current report is guided by these requirements.

The Deed of Covenant applying to the Spiny Rice-flower offset area was executed on 24 September 2014 and, following the execution of the covenant, a bond held by Trust for Nature was released in March 2015. This release of the bond allowed access to the funds intended for the implementation of the 10 year OMP.

It should be noted that delays occurred in the approval of the OMP and the implementation of the Deed of Covenant relative to the timelines conditioned in the Commonwealth permit. These delays have been investigated by the Commonwealth Environment Department and Melton City Council has been informed that no further action will be taken over these delays. However, these delays have resulted in some of the monitoring and reporting actions for November 2013 to October 2014 (note that the annual management cycle is defined in the OMP to run from November to October the following year) not being completed as prescribed in the OMP. Given that the OMP was not approved until December 2013 and funds for management not released until March 2015, this was unavoidable.

Environmental management of the site began in 2012 but it is the intention of Melton City Council to begin the ten years of formal management under the OMP from November 2014. This current report can thus be considered a baseline report for the offset area and the first full Annual Report will be submitted December 2015, reporting on the November 2014 to October 2015 management year.

This current report provides a summary of management actions undertaken thus far, assessment of the success of these actions, management recommendations and baseline monitoring results for the offset area. The next round of monitoring will be undertaken April-October 2015 and reported on in the December 2015 Annual Report.

2. Methods

2.1. Summary of Management Actions

Ongoing management of the offset site has been carried out by suitably qualified environmental management contractors and overseen by Council's Senior Land Management Officer. Detailed Works Summary Sheets for these management actions, dating back to July 2012, have been kept and are available for inspection upon request. A summary of these management actions has been prepared and is provided in this report.

2.2. General Vegetation Condition

Site walkovers

The Melton City Council Senior Land Management Officer has regularly inspected the site at intervals of less than 3 months. Inspection has involved walking over the site in a random meander and then inspecting areas/issues that draw attention in more detail. Feedback is then provided to the Land Management Contractor.

An additional inspection of the general vegetation condition was undertaken on Tuesday 30 September 2014. Present at this inspection were: Margaret Brennan (Coordinator Environmental Services, Melton City Council); Alan Webster (Senior Flora and Fauna Officer, Department of Environment, Land, Water and Planning, Port Phillip Region); Bernadette Power, (Environmental Planner, Melton City Council); Tony Herwerth (Senior Land Management Officer, Melton City Council). The inspection involved a walk over the Spiny Rice-flower offset area and the larger area of Mount Cottrell Recreation Reserve.

General Vegetation Condition Monitoring Quadrats

To help capture and document changes in vegetation condition, five 10 X 10 m quadrats, aligned north-south, were established in representative areas. These comprised 2 in the inner zone and 3 in the outer zone. Star pickets were used to mark the quadrats and each quadrat was clearly labeled as described in Section 4.1 of the OMP. The location of these quadrats on the site is shown in Figure 1. These quadrats were set up in May 2014 and baseline surveys were conducted 12 August 2014. The next (annual) monitoring of these quadrats will occur in August 2014.

2.3. Photo Monitoring

A total of 11 photos were taken as specified in Page 11 of the OMP. These photos were:

General Vegetation Condition Quadrats

Within each of the 5, 10 X 10 m quadrats, one photo was taken facing south into each quadrat.

Spiny Rice-flower Monitoring

Six photos were taken, facing south, into each of the Spiny Rice-flower zones.

2.4. Spiny Rice-flower Monitoring

Monitoring of the health and survivorship of known Spiny Rice-flower within the reserve was carried out on 12 August 2014 and data was recorded into the data collection template provided in the OMP. New plants were also tagged with a unique ID number at this time. Remnant Spiny Rice-flower and the Spiny Rice-flower planted in 2012 had been tagged previously. A search for new germinants will occur during the 2015 flowering season.

2.5. Management Recommendations

Remedial Actions & Recommended Changes to Works Program

The OMP (Table 3) details the management actions and timing for the Spiny Rice-flower offset area. The success with which each of these actions has been implemented is addressed in Section 3.5 below, discussion is also provided of any remediation required along with recommendations for changes to the works program.

3. Results

3.1. Summary of Management Actions

A summary of management actions, drawn from works summary sheets, is presented in Table 1. These management actions date back to 2012 and include hand weeding, burning, targeted spot spraying, direct seeding, watering, planting of Spiny Rice-flower and other indigenous herbs and monitoring. A summary of how each of the management actions outlined in the OMP (Table 3) have been implemented, an assessment of the success of each action and notes on any required remediation are provided in Table 2 below.

The management actions for Year 1 have been largely achieved. Those actions that have not been fully completed are 1.10; *annual monitoring of Spiny Rice- flower* and 1.12; *annual monitoring of reserve general condition*. The annual monitoring of Spiny Rice-flower has been partially completed with monitoring of all known plants (including remnants, those planted in 2012 and those planted in 2014) completed 12 August 2014 and reported on in this report. The search for new germinates across the entire offset area was not done in 2014, for reasons described in Section 1 above, however this search will be completed over the 2015 flowering period (April – August) and reported on in the December 2015 Annual Report.

Plate 1 shows a site inspection conducted by Trust for Nature representatives and Council environment officers in January 2013 and Plate 2 shows an environmental burn conducted on the site 14 May 2014.

3.2. General Vegetation Condition

Site Walkovers

General vegetation condition was judged to be good on the September 2014 walkover, with very little CALP Act or high threat environmental weed present. It was also noted that there was no sign of rabbit impact, that levels of biomass were appropriate, with good inter-tussock space maintained, and there was a variety of indigenous grasses and forbs present.

General Vegetation Condition Monitoring Quadrats

The following results represent the baseline condition and the first annual monitoring will be done in October 2015. Overall weed cover varied between 25% and 80% cover within the monitoring quadrats, These weeds comprised a combination of herb and grassy weeds but no woody weeds were present. Overall native understory within the quadrats varied from 1% in quadrat three to 73% in quadrat one. The most common native grasses within the quadrats were Spear Grass *Austrostipa* spp. and Wallaby Grass (*Rytidosperma* spp). Other native grasses, less common at the site, were also recorded including Kangaroo grass (*Themeda triandra*), Windmill Grass (*Chloris truncate*) and Native Millett (*Panicum decompositum*). A variety of native herbs were recorded in low densities, with the highest occurrence in quadrats one and four and the lowest densities in quadrats three and five. Full results of the survey are shown in Table 3.

3.3. Photo monitoring

General

Photos of each quadrat 1 to 5 are presented in Plates 3 to 7 below

Spiny Rice-flower Photo Monitoring

Photos of the spiny rice flower zones are provided in Plates 8 to 13 below

3.4. Spiny Rice-flower Monitoring

Spiny Rice-flower survey results are presented in Table 4.

In summary, the Spiny Rice-flower planting record and baseline survey details five Spiny Rice-flower planted as large stock in August 2012, 50 Spiny Rice-flower planted as tube stock on 12 August 2014, and three remnant plants. Of the five large stock Spiny Rice-flower planted in 2012, 2 were dead and three were still alive, two of the living remnant plants were in good condition and one was in poor condition. All of the tube stock Spiny Rice-flower planted in 2014 were in good condition at the time of planting and surveying.

3.5. Management Recommendations, Remedial Actions & Recommended Changes to Works Program

Based on detailed knowledge of the offset site and local area, additional indigenous species have been added to the planting schedule provided in the OMP. Table 5 below shows all of the indigenous species planted in the management area in 2014 and also provides a justification for why additional species were used. Table 6 shows the species schedule from the OMP, details which of these have been planted in the management area to date, why they were not used in 2014 and councils proposed use in subsequent years. Essentially, some species were not used because stock could not be sourced or they were not deemed high priority species for preservation, while some species were added as they have been significant grassland species in the local area but are now locally threatened due to urban development. Priority has been given to locally threatened species where local provenance stock or seed is currently available but where local populations are likely to be removed in the foreseeable future. Other common species detailed in the OMP planting schedule but not used thus far in plantings will be used in coming years where possible.

There are no other management recommendations at this time; remedial actions to be taken involve completion of the full monitoring regime set out in OMP for the 2014 - 2015 management cycle, which will be reported on in December 2015.

4. Conclusion

This report details the work done to date in protecting and improving the Spiny Rice-flower offset site at Mount Cottrell Recreation Reserve. Skilled environmental management of the grassland community at the site has been occurring since 2012 with substantial planting and direct seeding as well as augmenting of the Spiny Rice-flower population at the site. Due to delays in approval of OMP, implementation of the deed of covenant and release of management funds held in trust, formal implementation of the 10 year OMP commenced November 2014 and the first Annual Report on the implementation of the OMP will be provided in December 2015.

5. Tables

Table 1. Showing summary of management actions performed within offset zone to date, invoice number refers to invoice records kept by Melton City

Date	invoice no	Activity performed
Jul 2012	4613	Sensitive brush cut of weeds looking for Spiny Rice-flower
Aug 2012	4646	Guarded remnant Spiny Rice-flower plants; biomass reduction with brush cutters and rakes
Aug 2012	4656	Sorted Spiny Rice-flower for planting into male and female to plants
Aug 2012	4676	Planted Spiny Rice-flower, large stock, local provenance, commercially sourced; erected fencing around planted stock
Aug 2012	4685	Planting Spiny Rice-flower; watering
Sep 2012	4697	Watering Spiny Rice-flower
Sep 2012	4731	Watering Spiny Rice-flower
Sep 2012	4753	Watering Spiny Rice-flower
Sep 2012	4775	Watering Spiny Rice-flower; modified fencing
Nov 2012	4864	Watering Spiny Rice-flower; spot spraying Chilean Needle grass + Serrated Tussock
Nov 2012	4912	Watering Spiny Rice-flower
Oct 2012	4949	Watering Spiny Rice-flower
Mar 2013	5223	Watering Spiny Rice-flower
Apr 2013	5275	Watering Spiny Rice-flower
Apr 2013	5326	Hand weeding; temporary rabbit proof fence construction; Watering Spiny Rice-flower
Jun 2013	5382	Watering Spiny Rice-flower
Jun 2013	5402	Burning offset area and surrounds
Jul 2014	6447	Direct seeded Spiny Rice-flower into offset area
Aug 12 2014	6426	Hand weed; and set up monitoring quadrats; carried out monitoring
Aug 12 2014	6467	Hand weed Spiny Rice-flower
Aug 12 2014	6547	Planting; Brush cutting; hand weed Spiny Rice-flower areas

Date	invoice no	Activity performed
Aug 12 2014	6569	Planting; hand weeding Spiny Rice-flower Zones
Aug 12 2014	6576	Hand weed Spiny Rice-flower Zones; direct seeded native herbs; watering Spiny Rice-flower
Aug 12 2014	6606	Planting herbs; watering Spiny Rice-flower; planting 50 tube stock Spiny Rice-flower, 34 females 16 Males grown by MCC from bought local provenance seed.
Aug 28 2014	6608	Planting and watering herbs in Spiny Rice-flower zone
Sep 15 2014	6611	Fence repairs Mount Cottrell Recreation reserve
Sep 15 2014	6627	Spot spraying Serrated Tussock and Chilean Needle Grass; planting herbs; watering Spiny Rice-flower
Oct 10 2014	6667	Herb planting
Oct 13 2014	6620	Planting and watering herbs; watering Spiny Rice-flower
Oct 13 2014	6625	Fencing; planting herbs; spot spray preparation in offset area
Oct 13 2014	6637	Spot spraying; watering Spiny Rice-flower; fencing; watering; spot spray weeds in outer zone
Oct 13 2014	6663	Herb planting
Oct 13 2014	6673	Planting and watering herbs and Spiny Rice-flower
Oct 13 2014	6686	Watering herbs and Spiny Rice-flower
Nov 14 2014	6748	Watering Spiny Rice-flower
Nov 14 2014	6779	Watering
Nov 14 2014	6800	Spot spray Serrated Tussock and Chilean Needle Grass
Nov 26 2014	6734	Hand weed; spot spray; plant herbs
Nov 27 2014	6726	Mow and catch and brush cut non-indigenous annual grasses
Nov 27 2014	6770	Spot Spray Serrated Tussock and Chilean Needle Grass, hand weeding herbs.
Nov 27 2014	6831	Mow and catch weedy areas, watering herb areas and Spiny Rice-flower zones
Jan 5 2015	6953	Hand weed Spiny Rice-flower and herb zones
Feb 24 2015	6905	Spot spray annual grasses and C4 grasses

Table 2. Addressing management actions and assessing success and required remediation

Years of management 2015	Action number	Action	Successful	Reason why not	Remediation required
1	1.1	Establish and protect offset area	Yes		
	1.2	Using an appropriately qualified person, undertake baseline monitoring, establish photo monitoring points.	Yes		
	1.3	Maintain fences in good working order	Yes		
	1.4	Spot spray all high-threat grass/herb weeds in outer and inner zone before seed set using appropriate herbicide. Control total cover of weeds.	Yes		
	1.5	Hand weed all introduced species from within Spiny Rice Flower Zones	Yes		
	1.6	Control pest animals (e.g. rabbits, hares) within offset areas and surrounding areas	Yes		
	1.7	Water Spiny Rice-flower individuals every 2 weeks for first summer(Dec-Feb)	Yes		
	1.8	Undertake ecological burn within Outer and Inner Zones	Yes		
	1.9	Undertake supplementary planting/seeding in the Outer Zone	Yes		
	1.10	Undertake annual monitoring of Spiny Rice-flower during the flowering period	Partial- to be done in full in July- August 2015		
	1.11	Annual monitoring of reserve including general condition, quadrats and photo points	Yes, baseline		
	1.12	Undertake annual monitoring of reserve including general condition, quadrats and photo monitoring and prepare report	Yes, baseline		

Table 3. General vegetation surveys in 10 x 10 quadrats, conducted 8/08/2014

Date	8 August 2014	Quadrats % Cover				
		inner zone		outer zone		
		1	2	3	4	5
Weeds	Woody weeds	0%	0%	0%	0%	0%
	Herb weeds	15%	20%	70%	32%	25%
	Grass weeds	10%	60%	9%	40%	25%
	OVERALL weed cover	25%	80%	79%	72%	50%
Natives	Native grasses					
	<i>Austrostipa species</i>	40%	15%		4%	20%
	<i>Austrodanthonia species</i>	15%	2%		5%	20%
	<i>Themeda triandra</i>	1%			1%	
	<i>Chloris truncata</i>				1%	
	<i>Panicum decompositum</i>				1%	
	Native forbs					
	<i>Asperula conferta</i>	10%	1%		1%	
	<i>Erygium ovinum</i>	2%			1%	
	<i>Goodenia pinnatifida</i>	2%				
	<i>Whalenbergia spp.</i>	1%			2%	
	<i>Acaena echinata</i>	1%				
	<i>Senecio quadridentatus</i>		1%		1%	
	<i>Plantago varia</i>	1%				
	<i>Convolvulus remotus</i>			1%	1%	
	Cudweed				2%	
	Native shrubs (small < 1 m)					
	Native climbers/scramblers					
OVERALL native understorey cover	73%	19%	1%	20%	40%	
Bare ground	2%	1%	20%	8%	10%	

Table 4. Spiny Rice-flower monitoring, 12 August 2014, good means > 80% green canopy

Zone	ID	Year recruited /PLD	sex	alive / dead	Flowering	Origin	condition	TAG	Pimelea Zone
inner	1	unknown	f	alive	yes	REM	good	PS 1 REM	1
inner	51	2014	m	alive	yes	PLD	good	PS 51 PLD	1
inner	52	2014	f	alive	yes	PLD	good	PS 52 PLD	1
inner	53	2014	f	alive	yes	PLD	good	PS 53 PLD	1
inner	54	2014	f	alive	yes	PLD	good	PS 54 PLD	1
inner	55	2014	f	alive	yes	PLD	good	PS 55 PLD	1
inner	56	2014	m	alive	yes	PLD	good	PS 56 PLD	1
inner	57	2014	f	alive	yes	PLD	good	PS 57 PLD	1
inner	58	2014	m	alive	yes	PLD	good	PS 58 PLD	1
inner	2	unknown	m	alive	yes	REM	good	PS 2 REM	2
inner	44	2014	m	alive	yes	PLD	good	PS 44 PLD	2
inner	45	2014	f	alive	yes	PLD	good	PS 45 PLD	2
inner	46	2014	f	alive	yes	PLD	good	PS 46 PLD	2
inner	47	2014	f	alive	yes	PLD	good	PS 47 PLD	2
inner	48	2014	f	alive	yes	PLD	good	PS 48 PLD	2
inner	49	2014	f	alive	yes	PLD	good	PS 49 PLD	2
inner	50	2014	m	alive	yes	PLD	good	PS 50 PLD	2
inner	3	2013	f	alive	no	PLD	poor, 25% canopy alive	PS 3 PLD	3
inner	35	2014	m	alive	yes	PLD	good	PS 35 PLD	3
inner	36	2014	f	alive	yes	PLD	good	PS 36 PLD	3
inner	37	2014	m	alive	yes	PLD	good	PS 37 PLD	3
inner	38	2014	f	alive	yes	PLD	good	PS 38 PLD	3
inner	39	2014	f	alive	yes	PLD	good	PS 39 PLD	3
inner	40	2014	f	alive	yes	PLD	good	PS 40 PLD	3
inner	41	2014	f	alive	yes	PLD	good	PS 41 PLD	3
inner	42	2014	f	alive	yes	PLD	good	PS 42 PLD	3
inner	43	2014	m	alive	yes	PLD	good	PS 43 PLD	3

Zone	ID	Year recruited /PLD	sex	alive / dead	Flowering	Origin	condition	TAG	Pimelea Zone
inner	26	2014	f	alive	yes	PLD	good	PS 26 PLD	4
inner	27	2014	m	alive	yes	PLD	good	PS 27 PLD	4
inner	28	2014	f	alive	yes	PLD	good	PS 28 PLD	4
inner	29	2014	f	alive	yes	PLD	good	PS 29 PLD	4
inner	30	2014	f	alive	yes	PLD	good	PS 30 PLD	4
inner	31	2014	f	alive	yes	PLD	good	PS 31 PLD	4
inner	32	2014	m	alive	yes	PLD	good	PS 32 PLD	4
inner	33	2014	f	alive	yes	PLD	good	PS 33 PLD	4
inner	34	2014	m	alive	yes	PLD	good	PS 34 PLD	4
inner	15	2014	f	alive	yes	PLD	good	PS 15 PLD	5
inner	16	2014	m	alive	yes	PLD	good	PS 16 PLD	5
inner	17	2014	f	alive	yes	PLD	good	PS 17 PLD	5
inner	18	2014	f	alive	yes	PLD	good	PS 18 PLD	5
inner	19	2014	f	alive	yes	PLD	good	PS 19 PLD	5
inner	20	2014	f	alive	yes	PLD	good	PS 20 PLD	5
inner	21	2014	f	alive	yes	PLD	good	PS 21 PLD	5
inner	22	2014	m	alive	yes	PLD	good	PS 22 PLD	5
inner	23	2014	f	alive	yes	PLD	good	PS 23 PLD	5
inner	24	2014	f	alive	yes	PLD	good	PS 24 PLD	5
inner	25	2014	m	alive	yes	PLD	good	PS 25 PLD	5
inner	6	unknown	f	alive	no	REM	poor 50% canopy green.	PS 6 REM	6
inner	7	2013	f	alive	no	PLD	New growth but small plant	PS7 PLD	6
Inner	8	2013	f	alive	yes	PLD	good 75% canopy alive.	PS8 PLD	6
inner	9	2014	f	alive	yes	PLD	good	PS 9 PLD	6

Zone	ID	Year recruited /PLD	sex	alive / dead	Flowering	Origin	condition	TAG	Pimelea Zone
inner	10	2014	m	alive	yes	PLD	good	PS 10 PLD	6
inner	11	2014	f	alive	yes	PLD	good	PS 11 PLD	6
inner	12	2014	f	alive	yes	PLD	good	PS 12 PLD	6
inner	13	2014	m	alive	yes	PLD	good	PS 13 PLD	6
inner	14	2014	f	alive	yes	PLD	good	PS 14 PLD	6
inner	4	2012	f	dead	no	PLD	Dead	NA	unknown
inner	5	2012	f	dead	no	PLD	Dead	NA	unknown
KEY									
REM = Remnant									
REC = Recruited									
PLD = Planted									

Table 5. Species planted within the offset area (*included in OMP species list)

Planted 2014	Tube s	Reason for inclusion in 2014 Planting
<i>Poa sieberiana</i> var. <i>Sieberiana</i> *	200	Common plant in surrounding grassland
<i>Veronica gracilis</i> *	25	Common plant in surrounding grassland
<i>Brachyscome basaltica</i> *	200	Suitable for wet areas on site, was common now distribution severely reduced
<i>Brachyscome dentate</i> *	150	Suitable for wet areas on site, was common now distribution severely reduced
<i>Calocephalus citreus</i>	400	Common plant in surrounding grassland
<i>Chrysocephalum apiculatum</i> *	200	Common plant in surrounding grassland
<i>Chrysocephalum semipapposum</i> *	50	Suitable for the area on site, was common now distribution severely reduced
<i>Arthropodium strictum</i> *	300	Suitable for the area on site, was common now distribution severely reduced
<i>Bulbine bulbosa</i> *	425	Suitable for the area on site, was common now distribution severely reduced
<i>Helichrysum rutidolepis</i> *	50	Suitable for wet areas on site, was common now distribution severely reduced
<i>Ixiolaena</i> sp.*	150	Suitable for the area on site, was common now distribution severely reduced
<i>Leptorhynchos squatmatus</i>	400	Suitable for the area on site, was common now distribution severely reduced
<i>Microseris lanceolata</i> *	50	Suitable for the area on site, was common now distribution severely reduced
<i>Solenogyne dominie</i>	50	Suitable for the area on site, was common now distribution severely reduced
<i>Pelargonium rodneyanum</i> *	50	Suitable for the area on site, was common now distribution severely reduced
<i>Podolepis jaceoides</i> *	200	Suitable for the area on site, was common now distribution severely reduced
<i>Pycnosorus chrysanthes</i> *	100	Suitable for the area on site, was common now distribution severely reduced
<i>Pycnosorus globosus</i> *	100	Suitable for the area on site, was common, now distribution severely reduced
<i>Rutidosis leptorrhynchoides</i> *	50	AROT, suitable for the area on site, was common, now distribution severely reduced
<i>Velleia paradoxa</i>	250	Suitable for the area on site, was common, now distribution severely reduced

Table 6.Plant list in OMP (Biosis, 2013) and actual use of these species

Plant species listed in OMP	Use / Recommendation
Grasses <i>Anthosachne scabra</i> Common Wheat-grass	To be direct seeded when seed is obtained
<i>Austrostipa bigeniculata</i> Kneed Spear-grass	To be direct seeded after herb establishment, council has access to extremely large quantities of the seed of this species
<i>Austrostipa scabra</i> Rough Spear-grass	To be direct seeded after herb establishment, council has access to extremely large quantities of the seed of this species
<i>Bothriochloa macra</i> Red-leg Grass	To be direct seeded after herb establishment
<i>Rytidosperma caespitosum</i> Common Wallaby-grass	To be direct seeded after herb establishment
<i>Rytidosperma duttonianum</i> Brown-back Wallaby-grass	To be direct seeded after herb establishment
<i>Themeda triandra</i> Kangaroo Grass	To be direct seeded after herb establishment
<i>Calocephalus citreus</i> Lemon Beauty-heads	Planted 2014
<i>Haloragis heterophylla</i> Varied Raspwort	To be planted
<i>Leptorhynchos squamatus</i> Scaly Buttons	Planted 2014
<i>Plantago gaudichaudii</i> Narrow Plantain	Plant unavailable, on order for 2015 planting
<i>Solenogyne dominii</i> Smooth Solenogyne	Planted 2014
<i>Tricoryne elatior</i> Yellow Rush- lily	Plant unavailable, seed defies attempts at germination
<i>Velleia paradoxa</i> Spur Velleia	Planted 2014
<i>Wahlenbergia luteola</i> Bronze Bluebell	To be direct seeded

6. Plates

Plate 1. Trust for Nature representatives inspecting Spiny Rice-flowers with Coordinator of Environmental Services, Adrian Murphy Jan 2013.



Plate 2. Burning of offset area March 2013



Plate 3. General Vegetation Condition, Quadrat 1, taken 8 August 2014.



Plate 4. General Vegetation Condition Quadrat 2, taken 8 August 2014



Plate 5. General Vegetation Condition Quadrat 3, taken 8 August 2014



Plate 6. General Vegetation Condition Quadrat 4, taken 8 August 2014



Plate 7. General Vegetation Condition Quadrat 5, taken 8 August 2014



Plate 8. Spiny Rice-flower Zone 1 taken 19 March 2015



Plate 9. Spiny Rice-flower Zone 2 taken 19 March 2015



Plate 10. Spiny Rice-flower Zone 3 taken 19 March 2015



Plate 11. Spiny Rice-flower Zone 4 taken 19 March 2015



Plate 12. Spiny Rice-flower Zone 5 taken 19 March 2015



Plate 13. Spiny Rice Flower Zone 6 taken 19 March 2015



7. Figure

Figure 1. Mount Cottrell Recreation Reserve Spiny Rice-flower Management Zones showing general vegetation condition quadrats (VC INNER/OUTER QUAD #) as black squares and Spiny Rice-flower Zones (SRPZ#) as blue circles.

