

Compliance report

LAKE WALLACE BIODIVERSITY OFFSET SITES



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1 INTRODUCTION

1.1 THIS REPORT

This report reviews Snowy Monaro Regional Council's compliance with:

- actions and provisions in the Lake Wallace Biodiversity Offset Management Plan and Property Vegetation Plan
- Commonwealth and State Government approval conditions for the Lake Wallace dam project related to the biodiversity offset sites.

The report also summarises the findings of monthly Council inspections and fortnightly grazing leaseholder management records. Annual compliance reports are produced each year, based on the preceding calendar year. Consistent with the Lake Wallace dam approval conditions, the report has been prepared for submission to the Commonwealth and State Governments, and for publication on Council's website.

1.2 BACKGROUND

Cooma Monaro Shire Council/Snowy Monaro Regional Council completed the 320 megalitre Lake Wallace storage dam on Pigring Creek in mid 2016. The dam provides a town water supply to the nearby village of Nimmitabel. The project required the clearing of native vegetation, including one NSW and one Commonwealth listed Endangered Ecological Community (EEC). Two offset sites totalling 250 hectares located adjacent to and immediately upstream of the dam were established to compensate for the clearing; refer Figure 1-1 and Figure 1-2.

Council is responsible for establishing, managing and monitoring the offset sites in accordance with the Lake Wallace Offset Management Plan (OMP) (NGH Environmental 2015a) and a Property Vegetation Plan (PVP). The offset sites are leased for grazing to manage grassland areas, subject to a stock management plan contained in the OMP. The OMP provides for the preparation of a single annual compliance report addressing the requirements of local, State and Commonwealth governments.

1.3 PROGRESS SUMMARY

Council purchased the property containing the Lake Wallace block and Southern Blocks offset sites on 15 December 2014. The offset sites were legally established under a Property Vegetation Plan approved on 7 March 2016. Establishment works for the sites have been completed, including new paddock and riparian fencing, fencing of a threatened Small Snake Orchid colony, farm track surface and drainage works, stock crossing over Pigring Creek and erosion gully remediation. Noxious weed spraying on the property has been undertaken and wild pig and goat control is underway.

Stock grazing has been allowed at the offset sites under lease, subject to the stock management plan in the Offset Management Plan. The 2016 and 2017 grazing rotations have been completed. Grassland condition and compliance monitoring procedures to manage grazing have been implemented. An ecological condition monitoring program using 12 permanent monitoring sites has been implemented; monitoring surveys were undertaken in 2014, 2015 and 2017. Annual monitoring of the Small Snake Orchid colony in the Lake Wallace block was completed in 2014, 2015, 2016 and 2017.

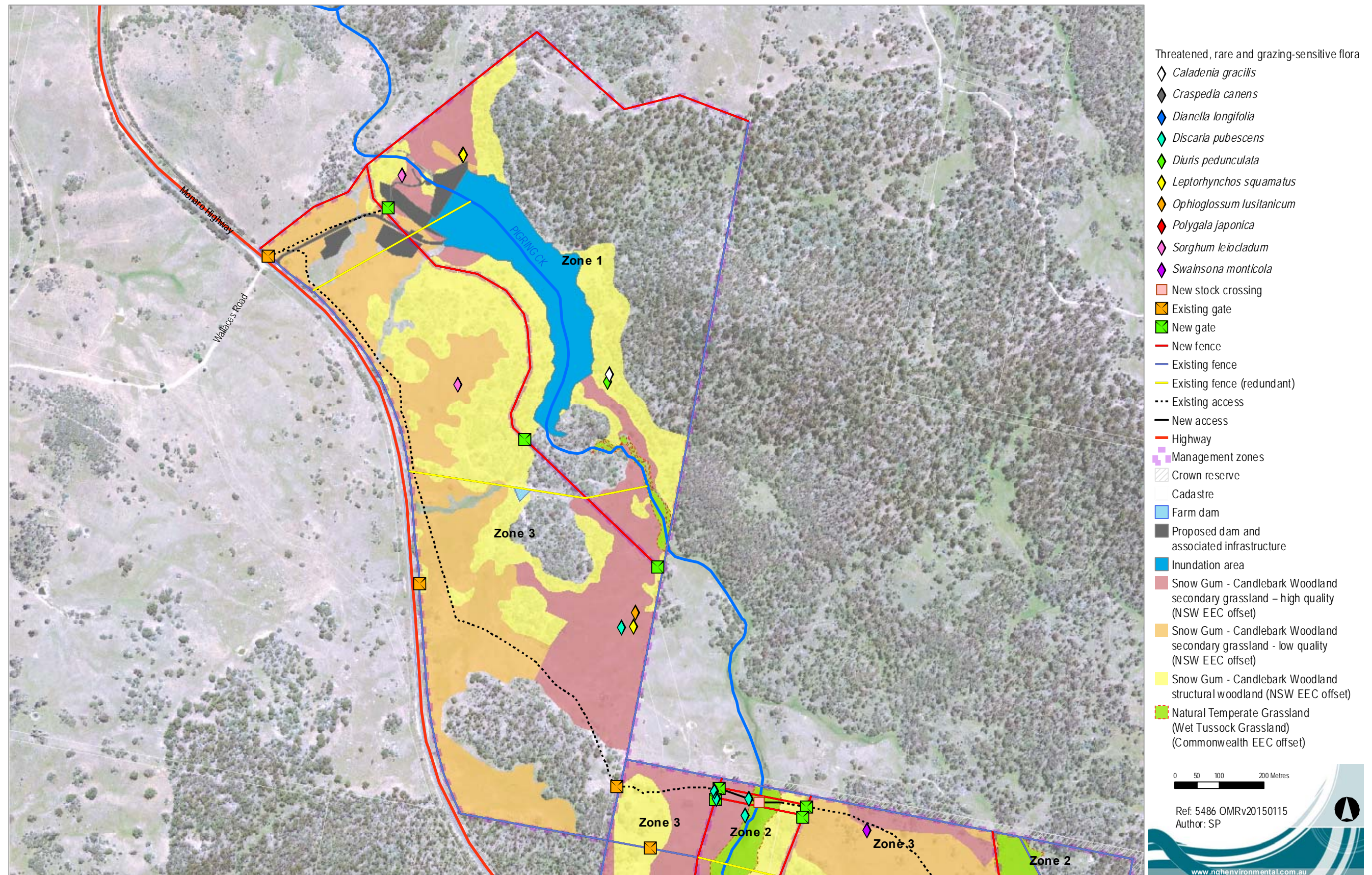


Figure 1-1 Lake Wallace block offset site (from NGH Environmental 2015a)

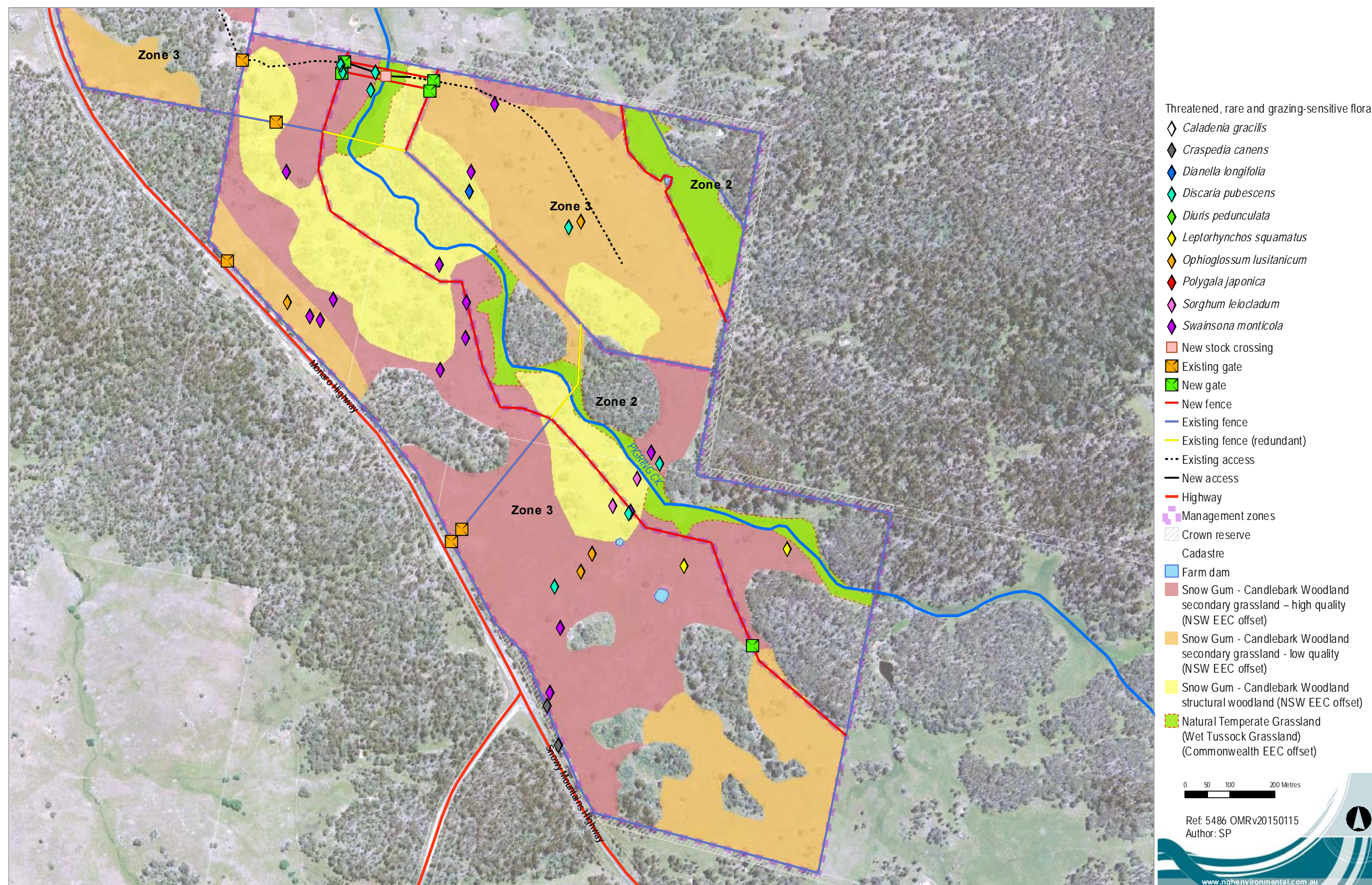


Figure 1-2 Southern Blocks offset site (from NGH Environmental 2015a)

2 COMPLIANCE REVIEW

2.1 PROJECT APPROVAL CONDITIONS

2.1.1 Commonwealth Government

The Commonwealth Government granted approval for the Lake Wallace project under Part 9 of the EPBC Act on 30 June 2014. The approval is subject to a number of conditions relevant to the establishment and management of the offset sites. Council's compliance with these conditions to date is summarised below.

Table 2-1 Compliance against Commonwealth approval conditions

Council must provide for the protection of the Southern Blocks offset site through a legally binding conservation covenant consistent with the EPBC Act Offsets Policy.

A legally binding Conservation Property Vegetation Plan (PVP) under the *Native Vegetation Act 2003* was approved for the offset sites on 7 March 2016 (PVP00029). The provisions of the PVP are registered on the property title in perpetuity.

Within two years of commencing the action, Council must provide evidence to the Commonwealth that the covenant has been implemented.

PVP documentation was appended to the 2017 compliance report, submitted to the Commonwealth on 27 July 2017.

Council must submit for the Minister's approval a Natural Temperate Grassland Management Plan. The plan must be approved in writing prior to commencement of the action. The plan must be implemented.

The Offset Management Plan (OMP) for the offset sites (NGH Environmental 2015a), which incorporates the requirements of a Natural Temperate Grassland Management Plan, was submitted to the Commonwealth Government on February 2015. Council received written notification of approval of the plan on 10 April 2015. This compliance report outlines the implementation of key actions and guidelines contained in the OMP.

The Natural Temperate Grassland Management Plan must include:

- A textual description of the site, including offset attributes, shapefiles and a map clearly defining the location and site boundaries
- A detailed description of the management actions designed to protect and improve the ecological quality of the Natural Temperate Grassland on the offset site
- Key milestones, performance indicators and timeframes for management actions
- A monitoring program to determine the success of the management actions
- Corrective actions and contingency measures to be implemented where monitoring shows that key milestones or performance indicators are not being met.

The OMP incorporates the above requirements. The OMP was approved by the Commonwealth Government on 10 April 2015.

Council must provide the approved plan to members of the public within 14 days on request.

The OMP has been published on Council's website and is available for download by the public from the website.

Council must maintain records substantiating activities related to the approval conditions, including implementation of the plan, available to the Commonwealth on request.

Council has collected and retained records relating to the approval conditions and implementation of the OMP, including monthly compliance inspection reports. Records relevant to the OMP are summarised in sections 2.3 and 2.4 of this report. Ecological monitoring data from the offset sites has been included in regular monitoring reports which have been submitted to the Commonwealth.

Within 3 months of each 12 month anniversary of commencement of the action, Council must publish on its website a compliance report addressing approval conditions, including implementation of the plan. Documentary evidence providing proof of the date of publication, and details of any non-compliance, must be provided to the Commonwealth at the same time as the compliance report is published.

This compliance report is intended to satisfy this condition. Annual compliance reports are intended for completion by the end of March each year, based on the preceding calendar year. Calendar years rather than the works anniversary cycle has been used so that whole grazing rotations are captured in each compliance report. The 2017 report covered the period from the commencement of works in April 2015 till the end of December 2016. The reports are submitted to the Commonwealth at the same time they are published on Council's website (<https://www.snowymonaro.nsw.gov.au/723/Lake-Wallace>).

Potential or actual contraventions of the conditions must be reported to the Commonwealth within 2 days of Council becoming aware of them, and included in the annual compliance report.

Aside from the variation to the compliance reporting cycle (explained above), Council is not aware of any contraventions relating to Natural Temperate Grassland or Commonwealth approval conditions.

Any activity not in accordance with the plan will require approval from the Commonwealth.

No activity has been undertaken which is not in accordance with the OMP in relation to the Natural Temperate Grassland or the Commonwealth approval elements of the plan.

Council must publish the plan on its website within 1 month of approval of the plan, and keep the plan on the website for the duration of the approval [until 31 December 2064].

The OMP has been published on Council's website and is available for download by the public from the website.

2.1.2 Local and State Government

Council approved the Lake Wallace project on 13 August 2014, subject to a series of conditions including concurrence conditions provided by the NSW Office of Environment and Heritage. Council's compliance with these conditions to date is summarised below.

Table 2-2 Compliance against Local and State Government approval conditions

Condition 31

Prior to construction, Council must secure the offset sites identified in the Biodiversity Offset Strategy under its management and control. The offset site must be managed in perpetuity in accordance with the Biodiversity Offset Strategy.

Council purchased the Wallace property, which includes the two offset sites identified in the Biodiversity Offset Strategy, on 15 December 2014. A legally binding Conservation Property Vegetation Plan (PVP) for the offset sites was approved under the *Native Vegetation Act 2003* on 7 March 2016 (PVP00029). The approved Offset Management Plan (OMP) (NGH Environmental 2015a) and the provisions of the PVP are consistent with the Biodiversity Offset Strategy (NGH Environmental 2013).

Condition 38

The water storage site must be managed in accordance with the OMP.

The water storage site forms part of the Lake Wallace block, which is one of the offset sites managed in accordance with the OMP. Aside from some delay caused by wet weather, works at the site have been consistent with the OMP. Grazing has been managed using the stock management plan in the OMP; some non-compliance with the stock management plan has occurred in relation to stocking rates and pasture thresholds (refer section 2.2).

Condition 39

Stock are to be excluded from within 50 metres of the high water level of the dam.

The eastern side of the dam has been fenced to exclude stock over a distance of at least 50 metres from the high water level of the dam. Stock are permanently excluded from the western side of the dam and Pigring Creek in the Lake Wallace block.

Condition 40

An in perpetuity Biodiversity Offset Area must be created, as recommended in the Council Draft Determination, Offset Site Assessment report and Offset Management Plan report.

The offset areas are to be managed for the purpose of conservation of threatened species habitat and ecological community values. No development is to occur in the offset areas.

The management of the offset areas is to be funded by Council, in accordance with an OMP.

The OMP is to be developed in consultation with, and approved by, OEH.

The OMP must be completed within 12 months of the start of construction of the Lake Wallace facility.

Council-owned offset sites as described in the Draft Determination, Offset Site Assessment report and Offset Management Plan report have been established and protected in perpetuity using a Property Vegetation Plan made under the *Native Vegetation Act 2003*. The Offset Management Plan (OMP) for the offset sites was developed in consultation with OEH and was approved by OEH on 19 September 2015, within 12 months of the commencement of construction. As specified in the OMP, the offset sites are managed for the purpose of conservation of threatened species habitat and ecological community values. Management is funded by Council in accordance with the approved OMP.

Condition 41

An appropriate legal mechanism to guarantee the management of the offset sites in perpetuity must be applied, through registration of title, using a Bio-banking Agreement, a Conservation Property Vegetation Management Plan or a Trust Agreement.

A legally binding Conservation Property Vegetation Plan (PVP) for the offset sites was approved under the *Native Vegetation Act 2003* on 7 March 2016 (PVP00029).

Condition 42

The colony of Small Snake Orchids identified in the SIS must be protected through all stages of the project, including temporary fencing during construction.

The Site Environmental Officer must make personnel aware of the location and significance of the colony.

The colony must be monitored during the flowering period each year from project approval until the dam has been constructed and operating for 5 years.

Monitoring results must be provided to OEH within 2 months of the fieldwork. Monitoring must include the number of individuals present, photographs of the colony and an assessment of whether there have been any impacts to the colony.

Any new Small Snake Orchid records at the site must be submitted to OEH and Bionet.

A permanent fence protecting the recorded orchid colony was constructed on 13 May 2015, prior to dam construction works, consistent with the OMP. The orchid colony has been subjected to specific annual monitoring since 2014. Monitoring reports have been submitted to OEH for the 2014, 2015, 2016 and 2017 monitoring surveys (NGH Environmental 2015b, 2015c, 2016, 2017).

Condition 43

The proponent must not clear more than 5.56 hectares of the Snow Gum Woodland EEC.

This condition has been met, taking both dam works and offset site establishment works into account.

2.2 OFFSET MANAGEMENT PLAN AND PVP IMPLEMENTATION

This section provides a summary of compliance against the key management actions and guidelines in the Offset Management Plan (OMP), and the management actions required under the Property Vegetation Plan (PVP). The PVP requires that the offset sites are managed according to the OMP and PVP. OMP and PVP reference numbering for each action is provided in Table 2-5 below.

2.2.1 Maximum stocking rate

The maximum stocking rate in the offset site paddocks is expressed in the OMP in terms of Dry Sheep Equivalent (DSE), which is the standard unit for carrying capacity. One DSE is the amount of feed required by a 2 year old 45 kg Merino sheep (wether or nonlactating, non-pregnant ewe) to maintain its weight. The OMP specifies that stocking rates during the February-September grazing period will not exceed 4 DSE per hectare of pasture (excluding mapped forest and woodland areas).

Maximum stocking numbers were calculated in 2016 for 250kg heifers, each of which represent 6.5 DSE. The stock grazed during 2017 were 300kg heifers and 350kg cows, with a higher DSE range of 7-10 DSE and 8-11 DSE (Agriculture Victoria 2018). An overall DSE rating of 8.5 has been adopted for these larger animals.

The grazing areas and maximum stocking rates (in DSE) for each paddock are shown on the map in Appendix C. The 'South' and 'West' paddocks in the Southern Blocks offset site are considered together because there is no water in the West paddock and gates between the paddocks are left open. Where gates between other paddocks are left open during the grazing period, the maximum stocking rates for both paddocks are combined.

It is noted that the accessible forest and woodland at the offset sites also supports a grassy groundlayer and makes some contribution to carrying capacity. The inclusion of these areas in the calculation of grazing area and maximum DSE is being considered, but at a discounted rate of 50% to account for reduced grass biomass, tree stems, logs and litter. Presently though, the maximum DSE figures apply to pasture-only areas. Grazing areas including discounted woodland areas are also shown on the map in Appendix C.

2.2.2 Stock grazing

Stocking during the 2017 season is summarised in Table 2.2. The data is based on Council monthly inspection reports and fortnightly leaseholder records (refer sections 2.3 and 2.4), and advice provided by Council for the 2017 offset site monitoring report (NGH Environmental 2018).

All paddocks were grazed during the season. The gate between the South and West paddocks was left open throughout the season. The gate between the West paddock and North paddock was open from 13 May 2017. The maximum stocking rate was exceeded on numerous occasions, particularly in the North, South and West paddocks.

Table 2-3 Stocking records 2017 (exceedances shaded)

Date	Paddock (max stocking rate - DSE, 300-350 kg cows/heifers)				Reported by
	North (164, 19)	East (94, 11)	West (99, 12)	South (159, 19)	
28/03/2017	18	9	50	16	SMRC
9/04/2017	35	12	17	16	Leaseholder
22/04/2017	23	12	17	16	Leaseholder
27/04/2017	20	11	20	0	SMRC
13/05/2017	23	12	17	16	Leaseholder
23/05/2017	11	12	12	0	SMRC
28/05/2017	18	-	17	32	Leaseholder
11/06/2017	17	-	18	32	Leaseholder
14/06/2017	12	0	0	5	SMRC
24/06/2017	17	-	18	32	Leaseholder
13/07/2017	35	0	0	24	SMRC
14/08/2017	0	0	25	18	SMRC
12/09/2017	32	0	0	20	SMRC
19/10/2017	0	0	0	0	SMRC
22/11/2017	0	0	0	0	SMRC
10/01/2018	0	0	0	0	SMRC

2.2.3 Weed control

Council's Noxious Weeds Officer inspected the offset sites for weeds listed under the *Noxious Weeds Act 1993* and other weeds on 27 March 2017 (SMRC 2017). Weeds recorded during the inspection are listed in Table 2-4 and shown on Figure 2-1.

Table 2-4 Noxious weeds at the offset sites 2017

Common name	Scientific name	Category	Degree of infestation	Approx. area (ha)
Serrated Tussock	<i>Nassella trichotoma</i>	4	Isolated plants	0.1
African Lovegrass	<i>Eragrostis curvula</i>	4	Isolated patches	0.5
Sweet Briar	<i>Rosa rubiginosa</i>	4	Scattered plants	2.0
Black Thistle	<i>Cirsium vulgare</i>	4	Patches with individual plants	4.0

The inspection found the property to be relatively clean and well managed. A handful of scattered, juvenile Serrated Tussock plants were identified. African Lovegrass is the main emerging threat with small patches along the length of the boundary with the Monaro Highway. Black (or Spear) Thistles (**Cirsium vulgare*) and Lambs Ear (**Verbascum thapsus*) have germinated in disturbed areas, with the bulk occurring around the dam wall in the Lake Wallace block (neither were classified as noxious weeds).

At the time of inspection, African Lovegrass near the MacLaughlin River had been controlled (in 2016) and some thistles around the dam wall had been chipped. An outlying African Lovegrass plant was chipped out and bagged during the inspection. The report indicated that Council's weeds staff would control Serrated Tussock and African Lovegrass in the weeks following submission of the report.

Sweet Briars were found to be growing mainly in semi-timbered areas and were entering winter dormancy at the time of the inspection report. Their control was not considered to be a priority until the next growing

season. The report noted that if Council wished to control Thistle and Lambs Ear, weed staff could make suitable arrangements with a local weed spraying contractor. The report recommended a Quikspray unit with 100+ metre retractable reels to avoid driving on disturbed areas.

The *Biosecurity Act 2015* provides specific legal requirements for State level priority weeds. The South East Regional Strategic Weed Management Plan 2017-2022 (SELLS 2017) prioritises weeds based on risk, impact and feasibility of control. Serrated Tussock is a State priority weed and African Lovegrass is a Regional priority weed. These species must be managed in accordance with published weed management plans.

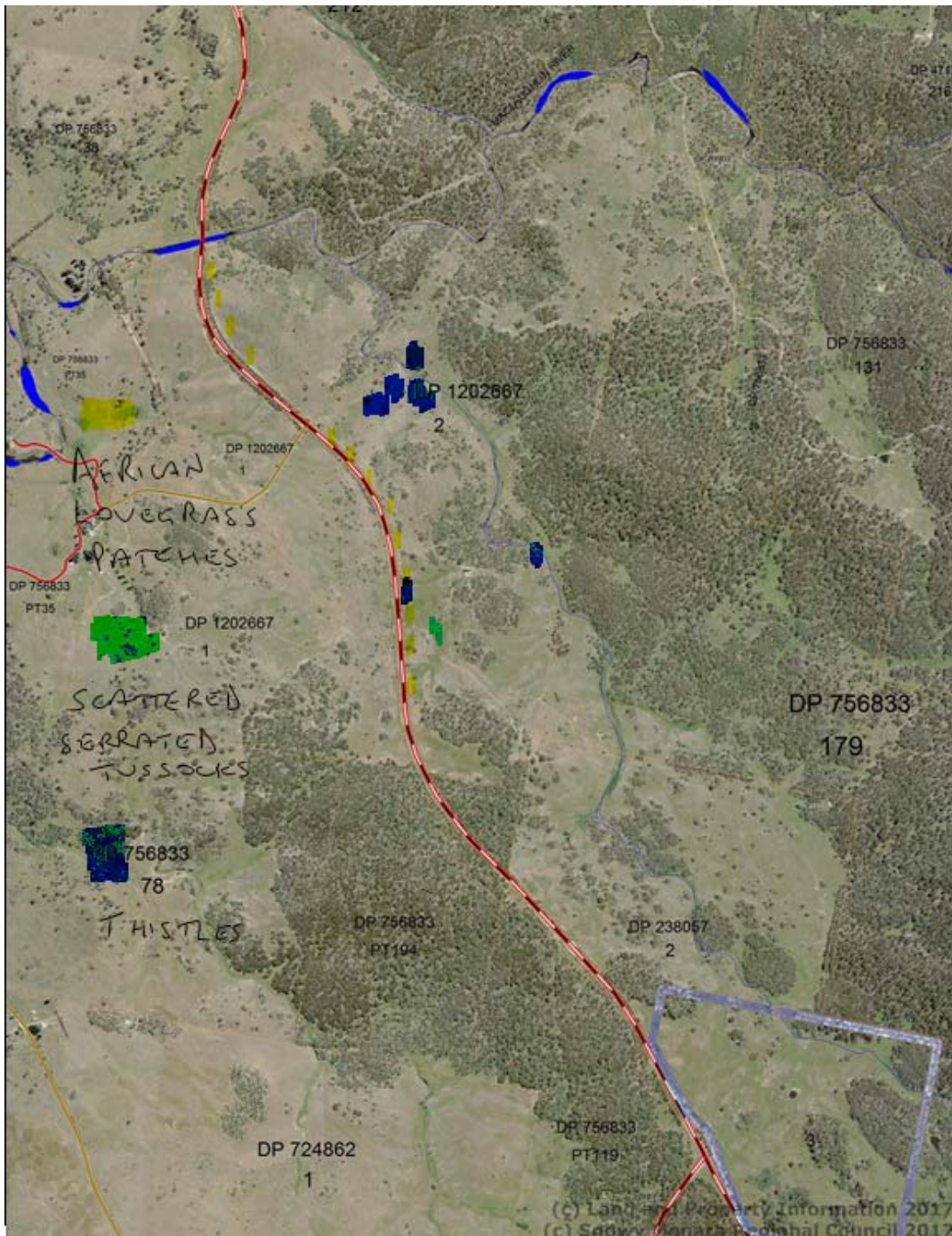


Figure 2-1 Localised noxious and other weed occurrences at the offset sites (SMRC 2017)

2.2.4 Pest animal control

In August 2017 Council undertook a baiting program targeting feral pigs at the offset sites. Advice and participation was sought from the LLS Cooma for the feeding and baiting stages of the program. Initial feeding indications returned high potential kill rates but when baiting was undertaken, baited feed remained untouched. It was assumed that the mob of feral pigs had simply moved on as pig rip activity in the sites had also ceased at that time.

The 2017 ecological monitoring report noted that pest animal activity was continuing at the offset sites, particularly rabbits and pigs. The report recommended that, subject to fresh or recent digging activity, pig trapping rather than baiting should be considered at the sites, in cooperation with the LLS and neighbours, until signs of pig presence is infrequent and uncommon. Portable pig traps are available from Bega LLS.

2.2.5 Ecological monitoring

The OMP provides for monitoring and evaluation against condition indicators and targets. The 2017 monitoring results showed a general decline in condition in relation to native vegetation cover, grass sward height, species richness, Floristic Site Value scores and abundance of grazing-sensitive species. Scat counts show an increase in macropod activity in both grazed and ungrazed plots (NGH Environmental 2018). The Small Snake Orchid monitoring showed greatly reduced visible colony size and area of occupancy.

The monitoring results appear to have been affected by the combination of an extended dry period preceding the survey and intense total grazing pressure. It was noted that sward heights were also very low in fenced riparian areas, which were inaccessible to stock.

In view of the 2017 monitoring results, it was recommended that stock grazing be suspended for 2018 and not recommence until the average grass height at all sites is at least 10 centimetres.

Table 2-5 Compliance against Offset Management Plan and Property Vegetation Plan provisions

OMP PVP	Actions and guidelines	Target June 2016	Achieved or on track?
1. Perimeter fencing, access and signage			
1.1 PVP 40	Existing perimeter fencing will be inspected and upgraded as required at the establishment of the offset sites.	X	Yes - completed June 2016
1.2 PVP 39	A new perimeter fence will be constructed across the northern boundary of the Lake Wallace block.	X	Yes - completed June 2016
1.3 PVP 45	Signage on gates and fences will be installed advising that the site is private land managed for conservation and public access is prohibited.	X	Yes - completed June 2016
1.4 PVP 42	The condition of fencing would be monitored during Council compliance inspections, and timely maintenance undertaken as required.		Yes
1.5 PVP 49	Where practicable, vehicles will not enter Wet Tussock Grassland areas, or be used at the offset sites when soils are very wet or saturated.		Yes
PVP 44	Council must ensure that perimeter gates are lockable and that gates are locked when Council and the leaseholder are absent from the property.		Yes
2. Riparian zone, woodland and Small Snake Orchid protection			
2.1 PVP 39	A fence will be constructed protecting a minimum 50 metre buffer from the top water level of Lake Wallace and either side of Pigring Creek, as shown on Figure 1-1 and Figure 1-2. The fence will be sited to avoid the need for tree clearing wherever practicable. Gates will be included to allow management access.	X	Yes - completed June 2016
2.2	Redundant fence sections will be considered for removal following construction of the riparian zone fence (Figure 1-1 and Figure 1-2).	X	Yes - completed June 2016
2.3 PVP 39	A fence will be constructed protecting the additional area of Wet Tussock Grassland on a tributary in the east of the Southern Blocks site (Figure 1-1 and Figure 1-2).	X	Yes - completed June 2016
PVP 40	Existing fencing will be upgraded as required to ensure livestock management and vehicle access management in accordance with the OMP.	X	Yes
PVP 41	Fencing will be completed prior to the first rotation of livestock grazing from the commencement of the PVP and establishment of the offset area.		Yes
2.4 PVP 53	Subject to consultation and agreement with Fisheries NSW and OEH, a rock bed-level creek crossing will be constructed at the Southern Blocks site to allow stock movement between paddocks on either side of the creek. The approaches will be drained and hardened with gravel.	X	Yes
PVP 53	The creek crossing will be double-gated and only used for moving livestock and vehicles between paddocks.		Yes

OMP PVP	Actions and guidelines	Target June 2016	Achieved or on track?
PVP 51	No formed tracks or drainage structures will be constructed in watercourses or the Natural Temperate Grassland community with the exception of the stock crossing at PVP 53.		Yes
2.5 PVP 55	The four existing farm dams at the offset sites will be renovated to improve capacity and groundwater interception and repair a spillway. The works would not affect the Natural Temperate Grassland EEC and would not significantly add to the existing dam disturbance footprint.	X	Yes - completed June 2016
2.6	The need for off-stream watering points will be assessed and an off-stream watering system installed if required, using a tank and trough system pumped from Pigring Creek. These works would not affect the Commonwealth Natural Temperate Grassland EEC in zone 2.	X	Yes (not required)
2.7	A suitable gate will be provided in the riparian zone fencing at the Lake Wallace block offset site to allow access to the women's waterhole at the upstream end of the reservoir, in consultation with Registered Aboriginal Parties.	X	Yes - completed June 2016
PVP 42	Council will monitor the condition of fencing and ensure fences are maintained to standard for stock management and vehicle access.		Yes
2.8 PVP 43	A permanent, pig-proof fence would be constructed around the Small Snake Orchid colony in the Lake Wallace Offset site to protect the colony from damage during dam construction and from pig predation.	X	Yes - completed June 2016
3. Stock Management Plan			
PVP 21 PVP 22 PVP 23	Grazing which assists the conservation objectives of the OMP is permitted. Grazing must be in accordance with the OMP. Strategic grazing is permitted in management zones 2 and 3, no grazing is permitted in zone 1.		Yes.
3.1 PVP 32 PVP 34	<p>The paddocks in the offset sites will be available for stock grazing between 1 February and 30 September to:</p> <ul style="list-style-type: none"> • utilise summer growth of Kangaroo Grass • remove rank growth in autumn • control exotic annuals in early spring if required. <p>Stocking rates during the February-September grazing period will not exceed 4 DSE per hectare of pasture (excluding mapped forest and woodland areas).</p>		Some stocking rate exceedances (refer section 2.2.2).
3.2 PVP 35	Paddocks in the offset sites will be rested (no grazing) from 1 October to 31 January.		Yes
3.3 PVP 36	If monitoring shows high abundance of exotic annual grasses such as <i>Anthoxanthum odoratum</i> , <i>Vulpia</i> spp and <i>Bromus</i> spp (exotic cover more than 50% in spring), and when seasonal conditions favour high germination and growth of annual exotics, short periods of grazing at no more than 4 DSE per hectare can be undertaken in October and early November to control these species. The timing and intensity of this grazing will be recorded and considered during the analysis of subsequent monitoring results.		Yes (not needed)

OMP PVP	Actions and guidelines	Target June 2016	Achieved or on track?
3.4 PVP 32 PVP 33 PVP 38	Grazing will not commence, and stock will be removed from the paddocks, during the February-September grazing period when: <ul style="list-style-type: none"> the live pasture cover falls below 80% (excluding surface rock), <u>or</u> the average grass sward height (disregarding the taller <i>Poa labillardierei</i> tussocks) is ≤ 50mm. The lessee/manager will monitor live pasture cover and sward height on a regular basis (fortnightly or more frequently) using an accepted methodology involving at least six representative sample sites distributed throughout each paddock.		Some pasture threshold exceedances (refer sections 2.3 and 2.4).
3.5 PVP 29	The lessee/manager will aim to maintain 100% ground cover in drainage depressions at all times.		Yes
3.6 PVP 37	Following the implementation of the above rotation for at least 5 years, the management zone 3 paddocks will be available for low intensity set stocking (1-2.5 DSE/ha) for a 20 month period (February to September the following year), at intervals of at least 5 years, subject to the removal of stock if any of the above condition thresholds are met.		Yes
3.7 PVP 27	Protein supplements, such as urea, may be utilised in the stock holding areas on the property that are not within the mapped Conservation area.		Yes
3.8 PVP 25	Cultivation, application of fertilisers and soil ameliorants (such as gypsum and lime), sowing of exotic pasture species or planting of exotic trees will not be undertaken at the offset sites.		Yes
3.9 PVP 31	Stock grazing will be excluded by fencing from within the Lake Wallace - Pigging Creek riparian corridor and from a tributary Wet Tussock Grassland area (zones 1 and 2) (Figure 1-1 and Figure 1-2).		Yes
3.10 PVP 30	Limited, short-duration grazing may be permitted in the fenced riparian area and the tributary Wet Tussock Grassland area in zone 2 in the Southern Blocks offset site during dry weather in Autumn to control grass biomass if necessary subject to monitoring results showing declining condition which is likely to be caused by excessive grass biomass, and subject to recommendations from an ecologist. If practicable, and if necessary, patch burning may be a better method of biomass control in these areas.		Yes
3.11 PVP 26	The grazing leaseholder must keep a record of the number and type of animals stocked at the offset sites, the dates they were stocked and de-stocked and the paddocks where they were stocked and de-stocked. If paddocks were destocked because of biomass, grass height or pasture cover criteria, this will also be noted.		Yes
3.12 PVP 28 PVP 49	Stock will be removed from the offset sites when soils are very wet or saturated if this can be done safely with minimal damage to paddock soils and vegetation. Stock will not be brought into the sites and vehicles will not be used off formed access tracks when soils are very wet.		Yes
4. Fire management			
4.1 PVP 20	If monitoring indicates a decline in the condition of zone 3 Snow Gum Woodland secondary grassland at the sites due to excessive grass growth, and subject to the recommendations by an ecologist, a trial burning program may be designed and implemented in this vegetation. In this case, Council will arrange for up to three 0.04 hectare burns with appropriate monitoring and review prior to any broader scale application of fire to control biomass. The location and design of the burning monitoring program would be developed by an ecologist in consultation with OEH.		NA

OMP PVP	Actions and guidelines	Target June 2016	Achieved or on track?
4.2	The seasonal timing for ecological burning will generally be autumn-winter. Early spring burns can be used to control exotic annual weeds.		NA
4.3	Any ecologically burning activities undertaken at the offset sites will apply the guidelines contained in this plan.		NA
5. Slashing			
5.1 PVP 19	Slashing may be used to control grassland groundlayer biomass in accessible areas if: <ul style="list-style-type: none"> • monitoring indicates a decline in the condition due to excessive grass growth • other methods of biomass control are not available or appropriate • slashing is recommended by an ecologist. 		NA
5.2 PVP 19	Slashing may be undertaken: <ul style="list-style-type: none"> • in autumn-winter to control grass biomass • in early spring to control annual weeds • in mid-late summer to harvest seed-bearing Kangaroo Grass hay for restoration elsewhere at the offset sites. 		NA
5.3	Grassland will not be slashed below 10 centimetres in height.		NA
5.4	As far as possible, slashing will be minimised in spring, when birds are nesting or where ground birds are dependent on tall grass habitat.		NA
5.5	No slashing will be undertaken in woodland areas or under tree canopies.		NA
5.6	Where possible, slashing should proceed from areas of higher conservation value to areas of lower conservation value, and from less weedy to weedier areas.		NA
5.7	All machines and vehicles will be washed down prior to entering the offset sites, and after leaving weedy sites. As far as possible, slashing will be avoided when weed seeds are viable.		NA
5.8	Slashing activities will not allow debris to enter waterways or be left beside stream banks.		NA
5.9	Slashing will not be undertaken in wet conditions when the vegetation and soil could be damaged.		NA
5.10	Clippings may need to be removed after slashing if they are likely to smother established native plants.		NA
5.11	Slashing will not be undertaken in areas where significant native shrubs (such as <i>Discaria pubescens</i>) are likely to be damaged.		NA
6. Weed control			
6.1 PVP 10	African Lovegrass, Briar Rose, Blackberry and Scotch Thistle will be controlled during the establishment phase of the offset sites, and as required thereafter. Briar Rose will be physically removed or treated using the cut stump method with a systemic herbicide in sensitive areas (near water, near <i>Discaria pubescens</i> , in high quality grassland). Blackberry will be controlled in accordance with the CMSC Blackberry Local Management Plan. African Lovegrass and Scotch Thistle will be controlled with herbicide and careful chipping in accordance with the CMSC Annual Noxious Weeds Control Calendar.	X	Yes

OMP PVP	Actions and guidelines	Target June 2016	Achieved or on track?
6.2 PVP 10	Serrated Tussock will be controlled as soon as possible using careful chipping or spot-spraying plants with a suitable herbicide in spring when tussocks are actively growing but before seed set. Any ripe seed on the plant will be first removed and destroyed. This wind-dispersed species will also be controlled in coordination with neighbouring landowners.	X	Not relocated
6.3 PVP 10	The noxious and invasive Viper's Bugloss and St John's Wort beside the adjacent highway will be controlled in accordance with the CMSC Annual Noxious Weeds Control Calendar.	X	Yes
PVP 11	Council will prepare a weed control plan to ensure efficient and effective control of noxious and environmental weeds. A copy of the plan will be provided to OEH.		Weed Control Plan in progress with Council's Noxious Weeds Manager
6.4 PVP 14	Stock moving from pastures outside the offset sites will be yarded or spelled in a clean area for 5 days prior to entering the offset sites to prevent the introduction and spread of weeds.		Yes
6.5 PVP 14	Vehicles and machinery moving from weedy areas will be thoroughly washed down before entering the offset sites.		Yes
6.6 PVP 13	If spraying is used, selective herbicides will be used on woody weeds where applicable. Care will be taken to avoid overspray and spraydrift, particularly near: <ul style="list-style-type: none"> • aquatic habitat area • threatened, rare and uncommon plants (such as <i>Discaria pubescens</i>) • native shrub habitats for woodland birds. 		Yes
6.7 PVP 13	Spraying will not be undertaken in windy conditions. High volume handgun and boom spray application will cease when wind speed exceeds 8-10kph. Handgun herbicide application for the control of grass weeds can be undertaken up to wind speeds of 13 kph if a 500mm lance is fitted to spray guns.		Yes
6.8 PVP 13	No herbicide other than Roundup Bioactive will be used within 20 metres of Pigring Creek or Lake Wallace.		Yes
6.9	Chemical will be mixed and poured off site, or in a hardstand area or over a spill mat, where this is not possible.		Yes
6.10 PVP 12	Weed control locations, chemicals and rates, target weeds and timing will be recorded to assist management review.		Yes
7. Pest animal control			
PVP 15	Council will implement a pest animal control program as specified in the OMP. Pest animals present on the property include rabbits, pigs, deer and foxes.	X	Yes
7.1 PVP 16	An integrated approach to rabbit and pig control will be adopted. Control activities will also be coordinated with neighbours and other landholders in the locality. Property owners and public land managers should coordinate pig control actions to ensure that trapping efforts are not targeting the same pigs at the same time, and shooting (with or without dogs) does not occur within 2 kilometres of trapping.	X	Removal of feral animals is ongoing; Council is liaising with Local Land Services.

OMP PVP	Actions and guidelines	Target June 2016	Achieved or on track?
PVP 17	Shooting of pest animals is not permitted unless it is undertaken in consultation with Local Land Services.		Yes
7.2	Rabbit populations will be controlled at the sites, using baiting, biological control and low-impact harbour and warren destruction (localised ripping, blasting or fumigation).	X	Further rabbit control required.
7.3	Where warrens extend under mature trees or rock outcrops, fumigation rather than ripping or blasting will be used to minimise environmental impact.		Yes
7.4	Rabbit control will be initiated as required following natural or induced outbreaks of biological control (myxomatosis, rabbit calicivirus disease). Poisoning will be undertaken during periods of relative food stress (Read <i>et al.</i> 2011).		Yes
7.5	Ideally, trapping and poisoning in areas regularly visited by pigs should be undertaken when feed is scarce.	X	Yes
7.6	The use of 1080 and other poisons would comply with all regulatory requirements including certification, training, neighbour notification and warning signage, storage and transportation, setbacks from waterways, roads and boundaries and notification of accidents and incidents.		Yes
7.7	Dead animals found during and after the poisoning program, and all unused baits must be collected and destroyed by burning or deep burial outside the offset sites to prevent the secondary poisoning of wildlife.		Yes
7.8	Portable or permanent pig traps and pre-baiting may be used in areas attractive to pigs, such as wet grassland or waterholes, or along trails.		Yes
7.9	Soil and vegetation disturbance will not be used to attract rabbits and other pest animals for baiting.		Yes
7.10	Pest animal control locations, methods and timing will be recorded to assist monitoring and management review.		Yes
PVP 18			
8. Track upgrading, and erosion and sedimentation control			
8.1	Access tracks will be upgraded and rollover and mitre drains will be installed on permanent farm tracks, including either side of Pigring Creek crossing (outside the Natural Temperate Grassland EEC). Track design, drainage methods and drain spacing and location would comply with Council's best practice guidelines and OEH (2012) Erosion and Sediment Control on Unsealed Roads. Tracks would generally not exceed 4 metres in width (including table drains).		Yes
PVP 46	Council must remediate the existing access tracks and construct new tracks shown in the OMP within 1 year of the commencement of the PVP.		Yes
PVP 47	Wet drainage line crossings must have appropriate drainage structures in place in order to protect water quality and soil.		Yes
8.2	Any material imported to the sites for track resurfacing or stabilising boggy sections would be non-dispersive and would come from a weed-free source.		Yes
PVP 48			
8.3	Native grass cover would be retained on existing track sections where ever possible. The track would be slashed intermittently as required to maintain route visibility.		Yes
PVP 49	Vehicles must remain on constructed tracks when soils are wet or waterlogged.		Yes
PVP 50	Council must ensure that no new tracks are formed through vehicle movements.		Yes

OMP PVP	Actions and guidelines	Target June 2016	Achieved or on track?
8.4 PVP 52	The established or developing erosion gullies at the offset sites would be remediated using 100 millimetre nominal size rip rap, underlain by geotextile, in the actively eroding sections, with jute mesh and coir logs used as necessary to protect exposed soils and slow and divert runoff up to 10 metres upslope of the actively eroding section.		Yes
9. Fauna habitat and vegetation management			
9.1 PVP 56	Eucalypt regeneration within the fenced Pigring Creek riparian corridor (zones 1 and 2) may be progressively thinned as required based on ecologist advice, to achieve an ultimate tree spacing of 10-20 metres to protect groundlayer vegetation. Cut stump herbicide application would be used to minimise non-target impacts.		NA
PVP 56	Thinning of dense eucalypt regeneration to 5-10 metre spacing may be undertaken if required, based on ecologist advice in accordance with the OMP. Thinning is only to be undertaken for ecological purposes. Prior to commencing thinning, Council must consult OEH and LLS.		NA
9.2 PVP 4 PVP 8	Native trees, stags, logs or shrubs will not be damaged or removed, other than for clearing required for fencing and other works specified in this plan, or thinning of regeneration to maintain vegetation cover or diversity.		Yes
PVP 4	No live vegetation (remnant or regrowth) is to be cleared except for thinning in accordance with the OMP, routine agricultural management activities (RAMAs) only specified in the PVP, approved clearing for the Lake Wallace dam.		Yes
9.3 PVP 9	Surface rock will not be removed or damaged, except to undertake the works specified in this plan.		Yes
10. Cultural heritage protection			
10.1	Works at the offset sites would avoid impacts to identified Aboriginal sites, including: <ul style="list-style-type: none"> the Women's Waterhole LW10 stone procurement site Aboriginal artefact sites LW5, LW6 and LW7 LW11 reburial site for salvaged Aboriginal objects (stone artefacts). 		Yes
10.2	Access to the Women's Waterhole will be provided utilising an existing access track along the western fenceline and descending along the crest of a spur to the waterhole. A suitable gate will be provided in the fenceline around the water storage.		Yes
10.3	Any works involving earthworks at the offset sites would be subject to Due Diligence assessment and approval in the form of an AHIP as required.		Yes
10.4	If an Aboriginal object is found while undertaking works at the offset sites, works must cease and OEH must be notified; an AHIP may be required. If human skeletal remains are found the proponent must stop work immediately, secure the area to prevent unauthorized access, and contact the NSW Police and OEH.		Yes
11. Inspection and compliance			

OMP PVP	Actions and guidelines	Target June 2016	Achieved or on track?
11.1	Council will conduct routine inspections of the offset sites at least monthly to ensure the provisions of this plan are being implemented.		Monthly inspection reports completed.
11.2	A comprehensive inspection and compliance report will be prepared by Council annually. The report will address approval conditions, including implementation of the plan and any breaches in compliance. The report will be published on the Council website within 3 months of each 12 month anniversary of the commencement of the project. Documentary evidence of the date of publication of the inspection and compliance report, and details of any non-compliance, will be provided to the Commonwealth at the same time as the compliance report is published. Potential or actual contraventions of the conditions must be reported to the Commonwealth within 2 days of Council becoming aware of them, and included in the annual compliance report.		Yes - a calendar year cycle rather than works anniversary has been used to capture whole grazing rotations in each report.
12. Monitoring and review			
12.1 PVP 5	Permanent monitoring sites will be established in each EEC vegetation unit targeting groundlayer vegetation composition and cover, and tree and shrub regeneration. Condition monitoring will be conducted in mid November 2014 by an ecologist at the establishment of the offset sites. Repeat monitoring would be undertaken in mid-November 2015, 2017, 2019, 2021, 2023 and 2025. Monitoring results will be used to evaluate management. Monitoring reports, including Small Snake Orchid monitoring results, will be prepared for Council and sent to OEH, LLS and the Commonwealth Environment Department.		Yes
PVP 6	Monitoring results will be reviewed and adaptive and corrective management measures applied in accordance with the OMP.		Yes
12.2	The colony of Small Snake Orchids will be monitored during the flowering period (mid – November) each year from project approval until the dam has been constructed and operating for 5 years.		Yes
12.3 PVP 7	The Offset Management Plan will be independently reviewed after 10 years of operation, taking into account monitoring results.		Yes

2.3 SUMMARY OF COUNCIL INSPECTIONS

The OMP provides for regular Council inspections of the offset sites to ensure the provisions of the plan are being implemented. Matters to be inspected are listed in the OMP. The results of the 2017 inspections are summarised in Table 2-6 below. A copy of the inspection checklist used by Council officers is provided in Appendix B.

The paddocks had reached the minimum grass height threshold for grazing by July-August 2017.

Despite below-threshold grass height, stock continued to graze the West and South paddocks during July, August and September, and the North paddock during August and September.

In September and October a feed trough was observed at southern end of the South paddock. Under the OMP, supplementary feeding is not permitted at the offset sites.

Fresh pig diggings were noted in March (all paddocks) and July (South), feral goats were noted in October (North) and November (East) and rabbits were noted in July (West and East).

Table 2-6 Summary of 2017 monthly Council compliance inspections

(✓ - within threshold, x – threshold exceeded)

	Grass cover	Grass height	Stock observed	Comments (summarised from inspection checklists)
10 Jan	North - ✓ West - ✓ East - ✓ South - ✓	North - ✓ West - ✓ East - ✓ South - ✓	North – 0 West – 0 East – 0 South – 0	All paddocks – fences, gates and Pigring Creek stock crossing all in good condition
Feb	Data not available at time of report finalisation			
28 Mar	North - ✓ West - ✓ East - ✓ South - ✓	North - ✓ West - ✓ East - ✓ South - ✓	North – 18 West – 50 East – 9 South – 16	North: fence damage – pigs entering from private land to north paddock. Pig diggings on east boundary. Lovegrass along fenceline to main road. West: pig diggings. East: boundary fence needs repair. Slight erosion on bank above stock crossing, crossing OK. Pig diggings. Blackberry and wombat hole where East and South boundary meet. Thistle weeds. South: few holes in internal fencing. Slight erosion top side of dam. Pig diggings.
27 April	North - ✓ West - ✓ East - ✓ South - ✓	North - ✓ West - ✓ East - ✓ South - ✓	North – 20 West – 20 East – 11 South – 0	North: erosion on track in north-west corner East: new pig diggings north-east boundary
23 May	North - ✓ West - ✓ East - ✓ South - ✓	North - ✓ West - ✓ East - ✓ South - ✓	North – 11 West – 12 East – 12 South – 0	North: Active erosion at locations where pigs are digging
14 June	North - ✓ West - ✓ East - ✓ South - ✓	North - ✓ West - ✓ East - ✓ South - ✓	North – 12 West – 0 East – 0 South – 5	North: gate open between north and west paddocks East: Crossing in good condition
13 July	North - ✓ West - ✓ East - ✓ South - ✓	North - ✓ West - x East - x South - x	North - 35 West - 0 East - 0 South - 24	North: 50% <50mm grass ht old pig diggings West: fence along highway needs repair/replacement. Rabbit diggings. No new pig diggings. No grazing to be allowed in this paddock. East: big branch falling over fence on sth boundary. East boundary fence to South paddock needs repair. Rabbit

				diggings near North-East boundary fence. Grazing ceased in East paddock. South: fence along highway needs repair/replacement. Increased pig diggings. No more grazing for this paddock.
14 Aug	North - ✓ West - ✓ East - ✓ South - ✓	North - x West - x East - x South - x	North - 0 West - 25 East - 0 South - 18	North: up to 70% of paddock <50mm grass ht West: star pickets lifting out of ground c. 150m sth of gate to South, may allow cattle access to creek
12 Sept	North - ✓ West - ✓ East - ✓ South - ✓	North - x West - x East - x South - x	North - 32 West - 0 East - 0 South - 20	South: feed trough at southern end of paddock
19 Oct	North - ✓ West - ✓ East - ✓ South - ✓	North - ✓ West - x East - x South - x	North - 0 West - 0 East - 0 South - 0	North: feral goats at nth end of paddock South: feed trough still at southern end of paddock
22 Nov	North - ✓ West - ✓ East - ✓ South - ✓	North - ✓ West - ✓ East - ✓ South - ✓	North - 0 West - 0 East - 0 South - 0	East: feral goats in paddock
10 Jan 2018	North - ✓ West - ✓ East - ✓ South - ✓	North - ✓ West - ✓ East - ✓ South - ✓	North - 0 West - 0 East - 0 South - 0	

2.4 SUMMARY OF LEASEHOLDER RECORDS

The OMP requires the grazing leaseholder to monitor live pasture cover and grass height on a regular basis and keep records of the number and type of animals stocked in each paddock, the dates they were stocked and de-stocked and the reasons for stock movements. A formal written checklist and methodology for fortnightly recording is provided, to be completed by the leaseholder and submitted to Council on a monthly basis. A copy of the fortnightly leaseholder checklist is provided in Appendix B.

A summary of the available leaseholder records for the 2017 January-September grazing season is provided in Table 2-7. The records show that grass cover and height thresholds were not exceeded during April, May and June. However, the stocking records show that the maximum stocking rate was exceeded during this period (refer section 2.2.2). New pig activity was reported in all paddocks in April, May and June, with high Kangaroo numbers in June.

Table 2-7 Summary of 2017 fortnightly leaseholder records (✓ - within threshold, x – threshold exceeded)

	Grass cover	Grass height	Stock in paddocks	Comments (summarised from checklists)
9 April	✓	✓	North – 23 x 300kg heifers East - 12 x 300 kg heifers South-West – 33 x 350kg heifers	Love grass sprayed in west paddock, Briars and St Johns Wort sprayed along fenceline. Active pig diggings in several locations
22 April	✓	✓	North – 23 x 300kg heifers East - 12 x 300 kg heifers South-West – 33 x 350kg heifers	All paddocks have pig activity.
13 May	✓	✓	North – 23 x 300kg heifers East – 12 x 300kg heifers South-West – 33 x 350kg cows	All paddocks have new pig activity. Gate between North and West paddock left open – reported by phone.
28 May	✓	✓	North and West – 36 in-calf cows/heifers East – destocked 27.5 South – 32 cows/heifers	All paddocks have new pig activity.
11 June	✓	✓	North and West – 35 cows/heifers South - 32 cows/heifers	Goat eradication undertaken. Pigs and large no. kangaroos.
24 June	✓	✓	North and West - 35 cows/heifers South - 32 cows/heifers	Pig diggings

3 CONCLUSION

The establishment and management of the Lake Wallace block and Southern Blocks offset sites has generally complied with the requirements of the Lake Wallace dam approval conditions, the Offset Management Plan and the Property Vegetation Plan.

Stock grazing has complied with the Stock Management Plan in the OMP in terms of grazing period, but has frequently exceeded maximum stocking rates and continued after the grass height threshold had been reached. The installation of a supplementary feeding trough is also contrary to the OMP and PVP.

The ecological monitoring undertaken in November 2017 (NGH Environmental 2018) found a general decline in native vegetation cover, grass sward height and other condition indicators. The decline was attributed to the combination of an extended dry period and intense total grazing pressure.

As recommended in the monitoring report, stock grazing should be suspended for 2018 and not recommenced until the average grass height at all sites is at least 10 centimetres.

The total number of grazing animals should be calculated for each paddock prior to the start of each grazing season, based on stock type and weight and the maximum DSE shown on the map in Appendix C. Both Council and the leaseholder should ensure that these limits are not exceeded at any time.

Both Council and the leaseholder should also ensure that paddocks are immediately destocked as soon as the grass height falls below threshold.

Council has been proactive in undertaking weed inspection and control work at the sites. Council and leaseholder monitoring indicates that pigs, rabbits and potentially goats require further control at the offset sites in order to meet the objectives of the Offset Management Plan. With other wild herbivores and grazing stock, these species contribute to total grazing pressure at the sites.

4 REFERENCES

- Agriculture Victoria (2018) Sustainable carrying capacity <<http://agriculture.vic.gov.au/agriculture/farm-management/business-management/ems-in-victorian-agriculture/environmental-monitoring-tools/sustainable-carrying-capacity>>
- Bureau of Meteorology (BOM) (2017) Monthly rainfall Cooma Visitors Centre.
<http://www.bom.gov.au/jsp/ncc/cdio/wData/wdata?p_nccObsCode=139&p_display_type=dataFile&p_stn_num=070278>
- Department of Primary Industries (DPI) (2006) Beef stocking rates and farm size - Hunter Region
<http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0014/70610/Beef-stocking-rates-and-farm-size--Hunter-region.pdf>
- Department of Sustainability, Environment, Water, Population and Communities (DSEWPAC) (2012)
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http://www.environment.gov.au/cgibin/sprat/public/publicspecies.pl?taxon_id=18325
- NGH Environmental (2013) Species Impact Statement Lake Wallace Water Storage Dam and Associated Infrastructure. Prepared for Cooma-Monaro Shire Council
- NGH Environmental (2015a) Offset Management Plan Lake Wallace Storage Dam and Associated Infrastructure. Prepared for Cooma-Monaro Shire Council
- NGH Environmental (2015b) Offset Monitoring Report 2014. Lake Wallace Storage Dam and Associated Infrastructure. Prepared for Cooma-Monaro Shire Council.
- NGH Environmental (2015c) Offset Monitoring Report 2015. Lake Wallace Storage Dam and Associated Infrastructure. Prepared for Cooma-Monaro Shire Council.
- NGH Environmental (2016) Offset Monitoring Report 2016. Lake Wallace Storage Dam and Associated Infrastructure. Prepared for Snowy Monaro Regional Council.
- NGH Environmental (2018) Offset Monitoring Report 2017. Lake Wallace Storage Dam and Associated Infrastructure. Prepared for Snowy Monaro Regional Council.
- Snowy Monaro Regional Council (2017) Property Inspection Report – Noxious Weeds.
- South East Local Land Services (SELLS) (2017) South East Regional Strategic Weed Management Plan 2017-2022. <http://southeast.lls.nsw.gov.au/__data/assets/pdf_file/0006/722706/South-East-Regional-Weed-Mgmt-Plan.pdf>

APPENDIX A OFFSET SITE PHOTOGRAPHS



Small Snake Orchid protection fence



Ecological monitoring plot at the Southern Blocks offset site



Lake Wallace dam wall and surrounds stabilised and seeded at the end of winter 2016



Erosion gully (E1) fenced and stabilised at the Lake Wallace offset site. 40 indigenous trees were planted.



Drainage line track crossing and culvert at the Lake Wallace offset site. Edge drains and jute logs upstream of the culvert, and jute mesh and energy dissipation rocks below the culvert have been installed.



Rock on access track to flow monitoring station to protect environmental and cultural values at the Lake Wallace offset site.

APPENDIX B COUNCIL AND LEASEHOLDER CHECKLISTS

Lake Wallace Offset Management Plan (Section 7)

Inspection and compliance

Monthly inspection checklist

Date:/...../.....

Test/check	Results/comments	
Check pasture cover at representative points in paddocks. Rule: at least 80% at half or more of the points for grazing.		
Check grass height (leaf height, disregarding inflorescences and Poa tussocks), measured with a ruler at representative points (mostly ridge crest, upper slope and midslope locations). Rule: at least 50mm at half or more of the points for grazing.		
Check locations, type and visible number of stock. Rules: - must not exceed 4 DSE/ha, must match leaseholder records. - grazing not permitted 1 October to 31 January.		
Check condition of fences and gates, especially riparian. Ensure gates can be/are locked when landholder and lessee are absent.		
Check condition of Pigging Creek stock crossing (after storms).		
Any active erosion areas (tracks, drainage lines, drains, farm dam spillways, Lake Wallace shoreline and spillway)?		
Any adverse impacts of the use of the property (including any new tracks, off-track vehicle damage during wet weather)?		
Any new noxious weed or pest animal infestations?		
Any soil or vegetation disturbance or activities not permitted under the OMP (including feeding, sowing of exotics and fertiliser use)?		
Any evidence of burning (pile or broadscale)?		
Any other management issues?		
Confirmation of exotic grass cover >50% <u>if required</u> – see over.		
Name (please print)	Signature	Date

Stock Management Plan – rules and trigger points

Zone 3 is available for grazing between 1 February and 30 September – stock to be removed from 1 October to 31 January. No grazing is permitted in the zone 1 and 2 riparian areas.

Grazing will not commence, and stock will be removed from the paddocks when:

- the live pasture cover falls below 80% (excluding surface rock), or
- the average grass height (leaf height, disregarding inflorescences and the taller *Poa labillardierei* tussocks) is $\leq 50\text{mm}$.

The leaseholder/manager must aim to maintain 100% ground cover in drainage lines at all times. No cultivation, liming, fertilizing, sowing of exotic species or protein supplements are allowed within the offset sites.

Stocking rates during the grazing period should not exceed 4 DSE per hectare of pasture (excluding forest and woodland areas). Information on DSE and stocking rates for various types of stock can be found at:

<http://mbfp-pastoral.mla.com.au/Managing-your-feedbase/4-Determine-carrying-capacity-and-stocking-rate>

<http://aimsag.com.au/software/FactSheet4.pdf>

Checking grass height and pasture cover (monthly)

Check live grass cover at representative points in each grazed paddock, with most points being on ridge crest, upper slope and midslope locations. A 30cm quadrat frame can be used at survey points evenly spaced along a transect across the paddock. Avoid areas with tree and rock cover. Also check grass height at each point (leaf height, disregarding inflorescences and *Poa* tussocks). Place a ruler vertically on the soil surface in the centre of the quadrat frame and visually estimate average leaf height in the quadrat. If half or more of the points are below 50mm grass height and/or 80% cover, stock must be removed from the paddock.

Example 80% cover photographs are attached. The cover estimate includes live plants, with apparently dead leaves attached to a live plant, but excludes litter, bare soil and cryptogams (mosses, lichen and fungi). Note that 1% of a 30cm quadrat is 30mm square, 20% is 134mm square and 25% is a quarter of the square.

Confirmation of exotic grass cover (if required)

The leaseholder may request an extension of grazing until 7 November to control a high density (>50% live cover) of spring-active exotic grasses (such as Sweet Vernal Grass, *Vulpia*, Bromes). In this case, the inspecting officer will need to confirm the cover percentage during the September inspection using an accepted field method. The officer will need to be able to distinguish exotic grasses from native species during the early spring period. The officer should also photograph the groundcover at the survey quadrats or transects. Extended grazing is intended to be a special, infrequent measure to deal with a spring flush of exotic grasses. The trade-off is that it will set back the flowering and seeding of native species for that season.

Methods

Exotic cover will only need to be quantitatively checked if the leaseholder requests extended grazing due to high exotic grass cover. Exotic cover can be measured using:

- Visual assessment of 30 centimetre quadrat frames at 6 representative points in each paddock. Sample points can be regularly spaced along an imaginary straight transect line across the paddock that is representative of the paddock as a whole, with points at paced intervals, or
- Step point transect(s) sampling at least 100 points along a line across each paddock which is representative of the paddock as a whole. Can use measuring tape and wire, or marked boot methods.

Method descriptions and more example % cover photographs are available from the following websites:

<http://agriculture.vic.gov.au/agriculture/farm-management/soil-and-water/erosion/groundcovering-measuring-tool>

<http://mbfp.mla.com.au/Pasture-growth/Tool-22-Assessing-ground-cover>

<http://www.fscla.org.au/Sustainable-land-management-practices-for-graziers.pdf>

Example 80% cover images



Leaseholder management records

Fortnightly checklist

Date:/...../.....

Test/check	Results/comments	
Number and type of animals in each paddock. Rule: must not exceed 4 DSE/ha of pasture for each paddock.		
Dates each paddock stocked and de-stocked. Rule: grazing not permitted 1 October to 31 January.		
Reasons for de-stocking (eg seasonal rotation, biomass, grass height or pasture cover, wet soils, fence damage)		
Stock spent at least 5 days in weed-free yard or paddock prior to entering offset site?		
Live pasture cover $\geq 80\%$ (100% in drainage lines) at half or more sample points? (include results for ≥ 6 points/paddock). Rule: grazing to stop when half or more of the points are $< 80\%$.		
Grass height $\geq 50\text{mm}$ (disregarding Poa tussocks and inflorescences) at half or more sample points? (include results for ≥ 6 points/paddock) Rule: grazing to stop when half or more of the points are $< 50\text{mm}$.		
Any weed or pest animal control undertaken? Note methods, chemicals and rates, target species, locations, timing.		
Any new weed or pest animal sightings?		
Any erosion control or fencing works required?		
Any other management action or issue which might affect the grassland or woodland at the sites?		
Name (please print)	Signature	Date

Stock Management Plan – rules and trigger points

Zone 3 is available for grazing between 1 February and 30 September – stock to be removed from 1 October to 31 January.

No grazing is permitted in the zone 1 and 2 riparian areas.

Grazing will not commence, and stock will be removed from the paddocks when:

- live pasture falls below 80% (excluding surface rock), or
- the average grass height (leaf height, disregarding inflorescences and the taller *Poa labillardierei* tussocks) is $\leq 50\text{mm}$.

The lessee/manager will aim to maintain 100% ground cover in drainage lines at all times.

Stocking rates during the grazing period should not exceed 4 DSE per hectare of pasture (excluding forest and woodland areas). Information on DSE and stocking rates for various types of stock can be found at:

<http://mbfp-pastoral.mla.com.au/Managing-your-feedbase/4-Determine-carrying-capacity-and-stocking-rate>

<http://aimsag.com.au/software/FactSheet4.pdf>

No cultivation, liming, fertilizing, sowing of exotic species or protein supplements are allowed within the offset sites.

Fortnightly pasture assessment

The leaseholder needs to monitor live pasture cover and grass height on a fortnightly basis using an accepted methodology. At least six representative sample points distributed throughout each paddock should be assessed. A majority of the points should be in middle and upper slope and ridge crest areas. Avoid areas with tree and rock cover. One set of methods is described at:

<http://mbfp.mla.com.au/Pasture-growth/Tool-22-Assessing-ground-cover>

<http://mbfp.mla.com.au/Pasture-growth/Tool-27-Field-based-pasture-measurements>

A modified and simplified set of methods is outlined below.

Live pasture cover

A 30 centimetre quadrat frame is thrown over the shoulder at ≥ 6 representative points within each paddock. If the frame lands on a *Poa* tussock or rock, throw again. Sample points can be regularly spaced along an imaginary straight transect line across the paddock that is representative of the paddock as a whole. Pace an even distance between the points.

At each frame landing point, visually estimate and record whether live grass cover is at least 80% (yes/no).

If half or more of the sample points are less than 80%, stock must be removed from that paddock.

Example 80% cover photographs are attached. The cover estimate includes live plants, with apparently dead leaves attached to a live plant, but excludes litter, bare soil and cryptogams (mosses, lichen and fungi). Note that 1% of a 30cm quadrat is 30mm square, 20% is 134mm square and 25% is a quarter of the square.

Grass height

At each frame landing point, place a ruler vertically on the soil surface in the centre of the quadrat frame. Visually estimate and record whether the average live leaf height in the quadrat is at least 50mm (yes/no).

If the average grass height in half or more of the sample points is less than 50mm, stock must be removed from that paddock.

A data recording pro forma is attached.

Example 80% cover images



Pasture assessment data sheet**Date:**

	Grass height $\geq 50\text{mm}$?	Live cover $\geq 80\%$?
Paddock		
Point 1	yes / no	yes / no
Point 2	yes / no	yes / no
Point 3	yes / no	yes / no
Point 4	yes / no	yes / no
Point 5	yes / no	yes / no
Point 6	yes / no	yes / no
	Half or more sites $\geq 50\text{mm}$? yes / no	Half or more sites $\geq 80\%$? yes / no

	Grass height $\geq 50\text{mm}$?	Live cover $\geq 80\%$?
Paddock		
Point 1	yes / no	yes / no
Point 2	yes / no	yes / no
Point 3	yes / no	yes / no
Point 4	yes / no	yes / no
Point 5	yes / no	yes / no
Point 6	yes / no	yes / no
	Half or more sites $\geq 50\text{mm}$? yes / no	Half or more sites $\geq 80\%$? yes / no

	Grass height $\geq 50\text{mm}$?	Live cover $\geq 80\%$?
Paddock		
Point 1	yes / no	yes / no
Point 2	yes / no	yes / no
Point 3	yes / no	yes / no
Point 4	yes / no	yes / no
Point 5	yes / no	yes / no
Point 6	yes / no	yes / no
	Half or more sites $\geq 50\text{mm}$? yes / no	Half or more sites $\geq 80\%$? yes / no

	Grass height $\geq 50\text{mm}$?	Live cover $\geq 80\%$?
Paddock		
Point 1	yes / no	yes / no
Point 2	yes / no	yes / no
Point 3	yes / no	yes / no
Point 4	yes / no	yes / no
Point 5	yes / no	yes / no
Point 6	yes / no	yes / no
	Half or more sites $\geq 50\text{mm}$? yes / no	Half or more sites $\geq 80\%$? yes / no

APPENDIX C Paddock Map

