



SAVING OUR SPECIES

Wee Jasper Grevillea

2020-2021 annual report card

Overall status*

- Populations at all sites are known to be on track.
- **Threat management is known to be on track at all sites, and population status is unknown at one or more sites.**
- Threat management is known to be off track at one or more sites, and population status is unknown at one or more sites.
- Populations at one or more sites are known to be off track.

* For SoS priority management sites (may not include all locations where the species occurs in NSW)

Summary

Management sites	Bluff; Burrinjuck Nature Reserve; Punchbowl; Wee Jasper North-west; Wee Jasper South
Action implementation	22 (of 22) management actions were fully or partially implemented as planned for the financial year.
Total expenditure	\$40,505 (\$26,550 cash; \$13,955 in-kind)
Partners	Environment, Energy and Science; Participating landholders; Saving our Species volunteers



Scientific name:
Grevillea iaspicula

NSW status:
Critically Endangered

Commonwealth status:
Endangered

Management stream:
Site-managed species





Photo: John Briggs

Priority management site: Bluff

Local government area:
Yass Valley

Partners:
Environment, Energy and
Science

Population outcome

-  **On track**
-  **On track (inferred)**
-  **Not on track (inferred)**
-  **Not on track**

Monitoring

Species population monitoring by one or more methods indicates response to management over time and provides an outcome measure.

Monitoring metric	Species abundance
Annual target	The 2020 population size of 215 plants is maintained or increased. A population decrease of more than 10% due to drought or other factor would be of concern.
Long term target	A minimum of 100 reproductively mature plants >1 m high are maintained at the site and by 2026, this is increased to a minimum of 150 reproductively mature plants >1 m high.
Monitoring result	Total count of 310 plants in the following height classes: 151 x <25 cm; 57 x 25–50 cm; 46 x 50–100 cm; 48 x 1–2 m; 8 x >2 m.
Scientific rigour of monitoring method	High
Conducted by	Environment, Energy and Science

Investment

Participant	Cash	In-kind
Environment, Energy and Science	\$5,895	\$3,400

Management actions

The following actions are those identified as being required in financial year 2020-2021 to secure the species in the wild.

Threat	Management action	Implemented as planned?
Any species with such a small range and population size is vulnerable to disturbance (e.g. fire, drought), and the loss of even a few plants can be of major significance.	Commence enhancement planting in autumn 2021 (target is 30–40 plants).	Partial implementation - Watering and plant guard materials purchased. Planting now proposed for winter/early spring 2021.
Current or potential future land management practices do not support conservation.	Seek the ongoing cooperation of the landowner in protecting the Wee Jasper <i>Grevillea</i> .	Yes
Loss and degradation of habitat and/or populations by invasion of weeds. Blackberry poses the greatest threat, but some sites are also heavily infested with sweet briar, St John's wort and other woody weeds including <i>Cotoneaster</i> and <i>Photinia</i> .	Hand weed St John's wort within the core fenced <i>Grevillea</i> population and undertake careful spot spraying of St John's wort within the larger, more recently fenced area.	Yes
Loss and degradation of habitat and/or populations from browsing by feral and domestic goats.	Maintain new and old fence as a back-up in case external fence is breached by feral goats.	Yes
Loss and degradation of habitat and/or populations from browsing by feral and domestic goats.	Undertake both an aerial and a ground shoot targeting feral goats.	Yes

Threat outcome

Assessment on the status of critical threats at this site.

Threat	Annual target	Threat status
Loss and degradation of habitat and/or populations by invasion of weeds. Blackberry poses the greatest threat, but some sites are also heavily infested with sweet briar, St John's wort and other woody weeds including <i>Cotoneaster</i> and <i>Photinia</i> .	Blackberry cover remains at <1% and St John's wort cover is reduced to < 5%.	On track
Current or potential future land management practices do not support conservation.	Ensure landowners remain supportive of conservation project.	On track
Loss and degradation of habitat and/or populations from browsing by feral and domestic goats.	No goats entering the fenced site.	On track
Loss and degradation of habitat and/or populations due to fire. In the early 2000s three of the larger populations were severely impacted by separate fires. Most of the adult plants and seedlings were killed within the areas burnt.	No fire at the site.	On track
Any species with such a small range and population size is vulnerable to disturbance (e.g. fire, drought), and the loss of even a few plants can be of major significance.	No more than a 10% loss of plants due to drought or other stochastic event.	On track

Site summary





Total count of 164 plants. Thirty-seven previously recorded plants within wire mesh guards and 105 unguarded. In addition, 22 new seedlings were established within the plant guards. This is a net increase of 92 compared to the 2020 population of 72 plants. Ongoing favourable seasonal conditions since the breaking of the drought in March 2020 have led to a pleasing return to the increasing population size trend recorded at this site over the last several years. Between 2019 and 2020, the population had declined by 29% due to the severe drought and associated plant death. Between the 2020 and 2021 population counts, the population increased from 215 to 310, mainly due to the recruitment of over 150 new seedlings. This has taken the total population to just over the 2019 count of 302 plants. Despite the significant net increase, there was a loss (20%) of 14 of the 70 plants >1 m in height present in 2020. These appeared to be delayed deaths due to permanent damage caused by the recent drought. However, this loss was more than compensated for by the recruitment of over 150 new seedlings. This threat status has thus been assessed as being on track. The spot spraying and hand removal of St John's wort over the past few years has resulted in a noticeable reduction in the density of St John's wort. The good seasonal conditions over the past 12 months have led to a much denser native grass groundcover than has been present for many years. This should assist in reducing the amount of soil erosion occurring on this very steep and exposed site. An enhancement planting project is planned that aims to speed up the colonisation of suitable habitat that is now protected within a larger additional area fenced in 2015. A batch of 50 seedlings is now available for use in the enhancement planting project, which is planned to commence in winter/spring 2021. The landowners remain supportive of protecting the Wee Jasper *Grevillea* and of the conservation project.

Priority management site: Burrinjuck Nature Reserve

Local government area:
Yass Valley

Partners:
Environment, Energy and
Science

Population outcome

-  **On track**
-  **On track (inferred)**
-  **Not on track (inferred)**
-  **Not on track**

Monitoring

Species population monitoring by one or more methods indicates response to management over time and provides an outcome measure.

Monitoring metric	Species abundance
Annual target	Maintain or increase the 2020 population size of 72 plants. A population decrease of more than 10% due to drought or other factor would be of concern.
Long term target	By 2026, there are at least 100 reproductively mature plants >1 m high at the site.
Monitoring result	Total count of 164 plants. Thirty-seven previously recorded plants within wire mesh guards and 105 unguarded. In addition, 22 new seedlings established within the plant guards. This is a net increase of 92 compared to the 2020 population of 72 plants.
Scientific rigour of monitoring method	High
Conducted by	Environment, Energy and Science

Investment

Participant	Cash	In-kind
Environment, Energy and Science	\$7,831	\$5,700

Management actions

The following actions are those identified as being required in financial year 2020-2021 to secure the species in the wild.

Threat	Management action	Implemented as planned?
Loss and degradation of habitat and/or populations due to fire. In the early 2000s three of the larger populations were severely impacted by separate fires. Most of the adult plants and seedlings were killed within the areas burnt.	Ensure no hazard reduction burns are conducted within the <i>Grevillea</i> site.	Yes
Loss and degradation of habitat and/or populations from browsing by feral and domestic goats.	Inspect fence quarterly and repair when required to ensure it remains goat-proof.	Yes
Loss and degradation of habitat and/or populations from browsing by feral and domestic goats.	Undertake annual aerial and ground shoots in the vicinity of the site to control feral goats.	Yes

Threat outcome

Assessment on the status of critical threats at this site.

Threat	Annual target	Threat status
Loss and degradation of habitat and/or populations from browsing by feral and domestic goats.	No evidence of feral goats entering the fenced <i>Grevillea</i> site.	On track
Loss and degradation of habitat and/or populations due to fire. In the early 2000s three of the larger populations were severely impacted by separate fires. Most of the adult plants and seedlings were killed within the areas burnt.	No fire occurring within the <i>Grevillea</i> site.	On track
Any species with such a small range and population size is vulnerable to disturbance (e.g. fire, drought), and the loss of even a few plants can be of major significance.	No more than a 10% net loss of the 2020 population size due to drought or other stochastic event.	On track

Site summary

Ongoing favourable seasonal conditions since the breaking of the drought in March 2020 have led to a welcome return to the trend of an increasing population size recorded at this site over the last several years. Between 2019 and 2020, the population had declined by 63% due to the severe drought and associated plant death. Between the 2020 and 2021 population counts, the population increased from 72 to 164 due to the recruitment of about 90 new seedlings. The population has not yet recovered to the 2019 count of 197 plants.

The population trend has thus been assessed as being back on track. The recovery of this site has nevertheless been set back several years by the recent drought due to the loss of so many plants that were reaching reproductive age. The input of new seeds into the site will be very limited until the new cohort of seedlings and other smaller plants reach reproductive capacity.

The low numbers of mature plants and thus the low input of new seed into this site is likely to greatly limit the recruitment of new seedlings for several years. This makes this population particularly vulnerable to stochastic events such as drought and fire that could kill most or much of the existing population before the soil seed bank is renewed.




Feral goats continue to be successfully excluded from the site, and the population is slowly recovering after feral goats had destroyed all the adult plants at the site in the early 1990s.

Priority management site: Punchbowl

Local government area:
Yass Valley

Partners:
Environment, Energy and
Science

Population outcome

-  **On track**
-  **On track (inferred)**
-  **Not on track (inferred)**
-  **Not on track**

Monitoring

Species population monitoring by one or more methods indicates response to management over time and provides an outcome measure.

Monitoring metric	Species abundance
Annual target	Increase or maintain the 2020 natural population of 69 plants. A population decrease of more than 5% due to drought or other factors would be of concern. Translocation planting survivorship of >80%.
Long term target	By 2026, a minimum of 50 reproductively mature plants >1 m high are established at the site. By 2036, a minimum of 200 reproductively mature plants >2 m high are established at the site and the population is recruiting naturally.
Monitoring result	Total natural population counted was 149 plants in following height categories: 88 x <25 cm; 14 x 25–50 cm; 7 x 50–100 cm; 22 x 1–2 m; 18 x 2 m. Total planted population was 107 plants in following height categories: 4 x <25 cm; 32 x 25–50 cm; 43 x 50–100 cm; 28 x 1–2 m; 0 x >2 m.
Scientific rigour of monitoring method	High
Conducted by	Environment, Energy and Science

Investment

Participant	Cash	In-kind
Environment, Energy and Science	\$6,261	\$3,000

Management actions

The following actions are those identified as being required in financial year 2020-2021 to secure the species in the wild.

Threat	Management action	Implemented as planned?
Any species with such a small range and population size is vulnerable to disturbance (e.g. fire, drought), and the loss of even a few plants can be of major significance.	Continue to propagate plants grown from seed for further enhancement planting. Undertake further enhancement plantings, water both recent and previous plantings through summer as necessary and weed within individual plant guards.	Yes
Any species with such a small range and population size is vulnerable to disturbance (e.g. fire, drought), and the loss of even a few plants can be of major significance.	Bag branches and collect up to 1,000 seeds if seasonal conditions permit.	Yes
Loss and degradation of habitat and/or populations by invasion of weeds. Blackberry poses the greatest threat, but some sites are also heavily infested with sweet briar, St John's wort and other woody weeds including <i>Cotoneaster</i> and <i>Photinia</i> .	Engage contractor to undertake follow-up weed spraying of blackberry, St John's wort and saffron thistle.	Partial implementation - dependent on other component
Loss and degradation of habitat and/or populations from grazing by domestic stock.	Check boundary fence to ensure it remains domestic stock-proof and repair if necessary.	Yes
Some populations within larger patches of native vegetation are subject to heavy browsing by native herbivores, primarily wallabies.	Place individual guards around all planted seedlings and maintain wallaby-proof fences around the 2 core natural <i>Grevillea</i> populations on the northern side of the site. Maintain the perimeter fence to ensure it remains effective at excluding wallabies from the <i>Grevillea</i> habitat.	Yes
Some populations within larger patches of native vegetation are subject to heavy browsing by native herbivores, primarily wallabies.	Inspect the site boundary and internal fences and repair if necessary to ensure they minimise access to the site by wallabies.	Yes

Threat outcome

Assessment on the status of critical threats at this site.

Threat	Annual target	Threat status
Loss and degradation of habitat and/or populations by invasion of weeds. Blackberry poses the greatest threat, but some sites are also heavily infested with sweet briar, St John's wort and other woody weeds including <i>Cotoneaster</i> and <i>Photinia</i> .	Foliage cover of blackberry is less than 5% of the area occupied by the <i>Grevillea</i> .	On track
Some populations within larger patches of native vegetation are subject to heavy browsing by native herbivores, primarily wallabies.	No significant browsing damage to the <i>Grevilleas</i> from wallabies.	On track
Loss and degradation of habitat and/or populations from grazing by domestic stock.	No evidence of domestic stock within the fenced area.	On track
Abseilers trampling on plants and seedlings.	Less than 5% of <i>Grevillea</i> plants damaged by recreational users.	On track
Loss and degradation of habitat and/or populations due to fire. In the early 2000s three of the larger populations were severely impacted by separate fires. Most of the adult plants and seedlings were killed within the areas burnt.	No fire occurring within the <i>Grevillea</i> population.	On track
Any species with such a small range and population size is vulnerable to disturbance (e.g. fire, drought), and the loss of even a few plants can be of major significance.	No more than 10% of plants are lost due to drought or other stochastic event.	On track

Site summary

The *Grevillea* population remains healthy and has increased from 152 in 2020 to 256 in 2021. This substantial increase is due to both 88 naturally recruited new seedlings and an additional 28 seedlings planted in winter/early spring 2020. The pleasing recruitment of new seedlings and the survival of 26 out of 28 newly planted seedlings have been in response to the good seasonal conditions during 2020-21. Of the 107 surviving plantings, 28 have now moved into the 1–2 m height class, and another 43 are between 50 cm and 1 m high. Some of these commenced flowering in winter and spring 2020, and many more are expected to flower in winter and spring 2021. This should result in the first seed being produced from the plantings and thus being spread across a much larger part of the site. It is hoped that within the next couple of years, the first recruitment from the plantings will occur.

After 5 years of blackberry and other weed sprayings, the condition of the site has improved dramatically. It is estimated that the cover of re-sprouting blackberry is now well below 1%. The wet conditions following the breaking of the drought in early 2020, unfortunately, led to the vigorous growth of St John's wort and saffron thistle in some parts of the site. These weeds are now the main target of the weed spraying effort.

The improved seasonal conditions over the past 12 months resulted in a much heavier flowering of the mature plants at the site than the previous year, and this subsequently led to good seed production. Seeds were collected in late 2020, but the yield will have been reduced due to the seed bags being raided by the introduced black rat. Although the number of seeds has not yet been counted, it is still expected that several hundred will have been successfully harvested. The seed will be used for both additional plant propagation and for storage in the botanical institution seed banks.

The major repairs to the boundary fence of the site that were undertaken in 2019–20 to ensure domestic stock kept in paddocks adjoining the site are excluded from the *Grevillea* habitat have been effective, and there were no signs of stock within site. The fence upgrade in 2019–20 has also been very effective in reducing wallaby numbers, as there has been very little browsing damage to the *Grevillea* plants over the past 12 months.

Priority management site: Wee Jasper North-west

Local government area:
Yass Valley

Partners:
Environment, Energy and Science; Participating landholders; Saving our Species volunteers

Population outcome



On track



On track (inferred)



Not on track (inferred)



Not on track

The species population is inferred to be on track based on threat management being on track. The population trend is unknown at this time.

Monitoring

Species population monitoring by one or more methods indicates response to management over time and provides an outcome measure.

Species population monitoring was not conducted at this site this financial year - Planned monitoring had to be postponed due to COVID-19 work travel restrictions in June 2021.

Investment

Participant	Cash	In-kind
Environment, Energy and Science	\$0	\$200
Saving our Species volunteers	\$0	\$175

Management actions

The following actions are those identified as being required in financial year 2020-2021 to secure the species in the wild.

Threat	Management action	Implemented as planned?
Current or potential future land management practices do not support conservation.	Engage with landholder and encourage the maintenance of an informal management agreement to maintain or enhance the species and its habitat.	Yes
Loss and degradation of habitat and/or populations by invasion of weeds. Blackberry poses the greatest threat, but some sites are also heavily infested with sweet briar, St John's wort and other woody weeds including <i>Cotoneaster</i> and <i>Photinia</i> .	Chemical control of St John's wort and blackberry where appropriate. Hand removal of weeds closer than 2 m to <i>Grevillea</i> plants.	Partial implementation - logistical delays
Loss and degradation of habitat and/or populations from grazing by domestic stock.	Check and maintain fence to ensure it remains stock-proof.	Yes

Threat outcome

Assessment on the status of critical threats at this site.

Threat	Annual target	Threat status
Loss and degradation of habitat and/or populations from grazing by domestic stock.	No evidence of domestic stock within the fenced area.	On track
Loss and degradation of habitat and/or populations by invasion of weeds. Blackberry poses the greatest threat, but some sites are also heavily infested with sweet briar, St John's wort and other woody weeds including <i>Cotoneaster</i> and <i>Photinia</i> .	Foliage cover of blackberry is less than 5% of the area occupied by the <i>Grevillea</i> .	On track
Loss and degradation of habitat and/or populations due to fire. In the early 2000s three of the larger populations were severely impacted by separate fires. Most of the adult plants and seedlings were killed within the areas burnt.	No fire occurring within the <i>Grevillea</i> population.	On track
Current or potential future land management practices do not support conservation.	No adverse impacts to the site due to unsympathetic management practices.	On track
Any species with such a small range and population size is vulnerable to disturbance (e.g. fire, drought), and the loss of even a few plants can be of major significance.	No more than 10% of plants lost due to drought or other stochastic event.	Not assessed

Site summary

The annual population count scheduled for June 2021 had to be postponed due to COVID-19 work travel restrictions, which remained in place at the time of preparing this report. During a site inspection in May, numerous seedlings were observed at the site, which is consistent with the significant seedling recruitment recorded at the other Wee Jasper *Grevillea Saving our Species* (SoS) sites. Based on positive population trends at all other Wee Jasper *Grevillea* SoS sites, it is most likely that there has been a population increase during the past 12 months at the Wee Jasper North west site. The site remains in good condition, and the fence has remained effective in excluding wallabies, as there is no sign of browsing damage to the *Grevillea* plants. Weed densities remain low, but some blackberry resprouts will need treating in 2021–22.





The interest and previous weed control work done by a nearby resident should continue to be supported by the SoS program. Further seed collection should be undertaken for placement in long-term storage when seasonal conditions are favourable for a good seed crop. In the long term, the SoS program should seek to fence the area supporting the 75 *Grevilleas* that have been recruited over the past few years outside of the existing fenced enclosure. The survival of these plants would be highly jeopardised if a future landowner were to introduce domestic stock to the paddock that surrounds the fenced *Grevilleas*.

Priority management site: Wee Jasper South

Local government area:
Yass Valley

Partners:
Environment, Energy and
Science

Population outcome

-  **On track**
-  **On track (inferred)**
-  **Not on track (inferred)**
-  **Not on track**

Monitoring

Species population monitoring by one or more methods indicates response to management over time and provides an outcome measure.

Monitoring metric	Species abundance
Annual target	Maintain or increase the 2020 population size of 360 plants. A population decrease of more than 10% due to drought or other factors would be of concern.
Long term target	By 2026, there is a minimum of 300 reproductively mature plants >1 m high on the site.
Monitoring result	Total population counted was 456 plants in following height categories: 99 x <25 cm; 41 x 25–50 cm; 25 x 50–100 cm; 100 x 1–2 m; 191 x >2 m.
Scientific rigour of monitoring method	High
Conducted by	Environment, Energy and Science

Investment

Participant	Cash	In-kind
Environment, Energy and Science	\$6,564	\$1,480

Management actions

The following actions are those identified as being required in financial year 2020-2021 to secure the species in the wild.

Threat	Management action	Implemented as planned?
Any species with such a small range and population size is vulnerable to disturbance (e.g. fire, drought), and the loss of even a few plants can be of major significance.	Bag branches and collect up to 1,000 seeds if seasonal conditions permit.	Yes
Any species with such a small range and population size is vulnerable to disturbance (e.g. fire, drought), and the loss of even a few plants can be of major significance.	Commence enhancement planting in autumn 2021 (target is 30–40 plants).	Partial implementation - logistical delays
Current or potential future land management practices do not support conservation.	Engage with landholder and encourage the maintenance of an informal management agreement to maintain or enhance the species and its habitat.	Yes
Loss and degradation of habitat and/or populations by invasion of weeds. Blackberry poses the greatest threat, but some sites are also heavily infested with sweet briar, St John's wort and other woody weeds including <i>Cotoneaster</i> and <i>Photinia</i> .	Engage contractor to undertake follow-up weed spraying of blackberry, St John's wort and saffron thistle.	Conducted, but not as planned - dependent on other component
Loss of genetic integrity due to hybridisation with <i>Grevillea rosemarinifolia</i> along with woody weeds such as privet.	Locate and hand remove any <i>Grevillea</i> hybrids before they reach flowering stage.	Conducted, but not as planned - logistical delays

Threat outcome

Assessment on the status of critical threats at this site.

Threat	Annual target	Threat status
Loss and degradation of habitat and/or populations by invasion of weeds. Blackberry poses the greatest threat, but some sites are also heavily infested with sweet briar, St John's wort and other woody weeds including <i>Cotoneaster</i> and <i>Photinia</i> .	Foliage cover of blackberry is less than 5% of the area occupied by the <i>Grevillea</i> .	On track
Loss and degradation of habitat and/or populations due to fire. In the early 2000s three of the larger populations were severely impacted by separate fires. Most of the adult plants and seedlings were killed within the areas burnt.	No fire occurs within the <i>Grevillea</i> population.	On track
Loss and degradation of habitat and/or populations from grazing by domestic stock.	No evidence of domestic stock within the fenced area.	On track
Loss of genetic integrity due to hybridisation with <i>Grevillea rosemarinifolia</i> along with woody weeds such as privet.	All hybrid <i>Grevillea</i> plants are detected and removed before they reach flowering stage.	On track
Current or potential future land management practices do not support conservation.	No evidence of land use practices adversely affecting the <i>Grevillea</i> site.	On track
Any species with such a small range and population size is vulnerable to disturbance (e.g. fire, drought), and the loss of even a few plants can be of major significance.	No more than 10% of plants are lost due to drought or other stochastic event.	On track

Site summary

Ongoing favourable seasonal conditions since the breaking of the drought in March 2020 have led to a pleasing return to the increasing population size trend recorded at this site over the last several years. Between 2019 and 2020, the population had declined by nearly 10% due to the severe drought and associated plant death. Between the 2020 and 2021 population counts, the population has increased from 360 to 456, mainly due to the recruitment of over 100 new seedlings. This has taken the total population well past the 2019 count of 403 plants. Despite the significant net increase, 28 plants out of the 218 plants in the greater than 2 m height class that was present in 2020 had died during the past 12 months, almost certainly from residual stress suffered during the last drought.

Following several years of concerted effort to control the weeds at this site, there is now an extensive area of suitable habitat with low weed densities into which the species will be able to both colonise naturally and into which an enhancement planting can commence to hasten the spread of the species into currently unoccupied parts of the site. The first planting is now proposed for winter/spring 2021.

Seeds were successfully germinated in October 2019, and a small batch of 40 seedlings are now available for use in the enhancement planting project.

Because of the frequent good rain events over the past 12 months, there were major occurrences of saffron thistle and St John's wort during 2020–21. A contractor was engaged to undertake 4 days of follow-up weed spraying to treat these weeds and scattered patches of re-sprouting blackberry.

A further seed collection was made in late 2020/early 2021. Although there was a good seed crop, the seed bags were heavily raided by the introduced black rat, and the seed harvest is thus expected to have been significantly reduced (counting of the seed collected is not yet complete).

The landowners remain highly supportive of protecting the *Grevillea* and of the SoS conservation project.

Saving our Species 2020-2021 annual report card for Wee Jasper *Grevillea* (*Grevillea iaspicula*). For more information refer to the specific strategy in the Saving our Species program.