

ANNEXURE 1: NCA ECOLOGICAL PLAN ACTION PLAN

1. Gurubang Dhawura (Stirling Park)

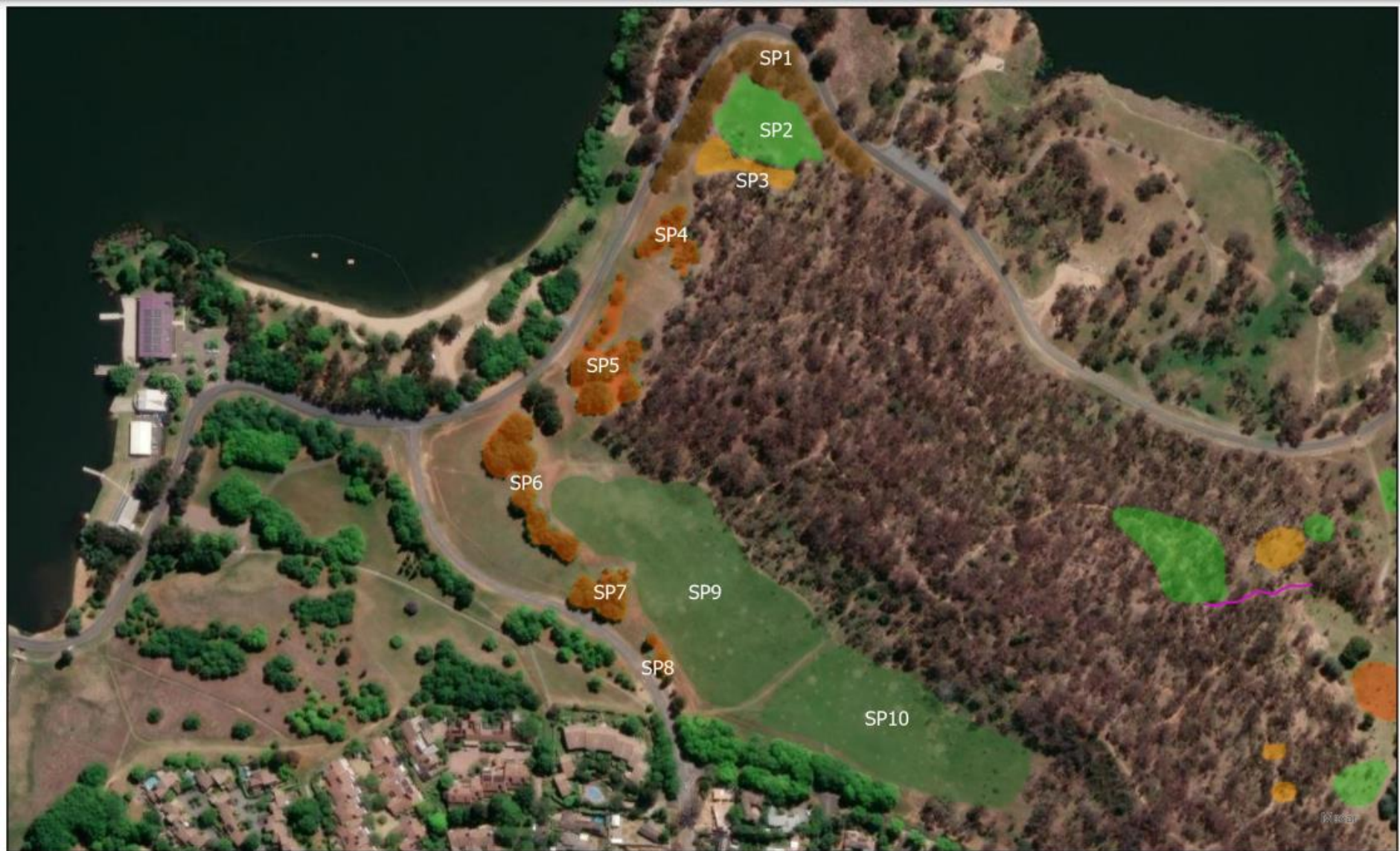


Stirling Park Grassy Ecosystem Restoration Plan - Overview

- | | | |
|-------------------------|-------------------------------|----------------|
| ● ERDP tidyPoints | ■ Regeneration Area | ■ Weed Control |
| ■ Eucalypt Thinning | ■ Revegetation Open Scattered | ■ Woody Weeds |
| ■ Existing Revegetation | ■ Revegetation Poa Carex | — Track Works |
| ■ Non Specific | | |



Map prepared by Environmental Restoration Design & planning. While all care is taken to ensure accuracy, it cannot be guaranteed that it is free from errors. Base layers were obtained with permission from the ACT Government spatial database. Date 17 June 2024



Stirling Park Grassy Ecosystem Restoration Plan - East

- | | |
|---|--|
|  Eucalypt Thinning |  Weed Control |
|  Existing Revegetation |  Track Works |
|  Regeneration Area | |



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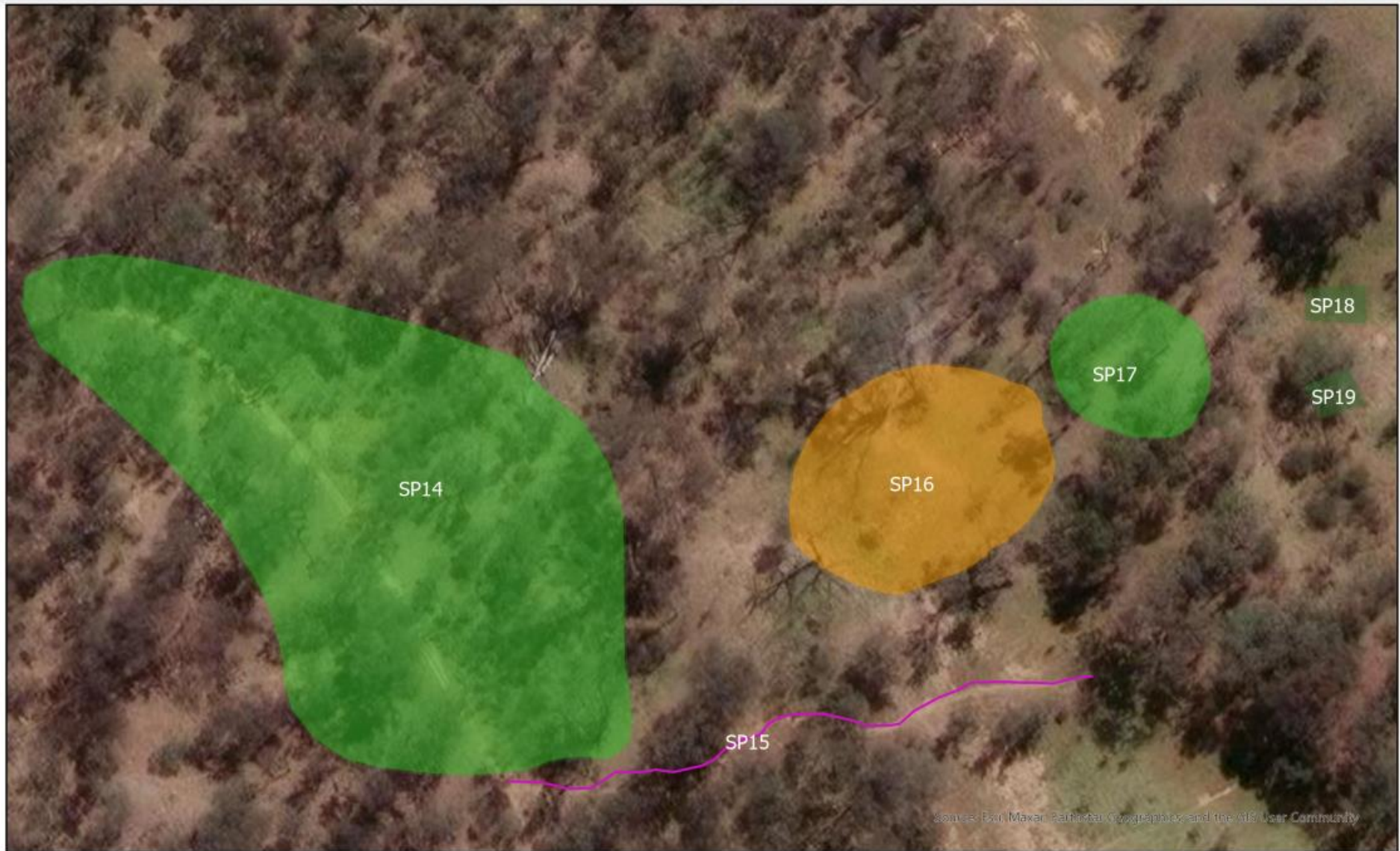
Source: Esri, Maxar, Earthstar, GeoGraphics, and the GIS User Community

Stirling Park Grassy Ecosystem Restoration Plan - North

- Weed Control
- Track Works



Map prepared by Environmental Restoration Design & Planning. While all care is taken to ensure accuracy, it cannot be guaranteed that it is free from errors. Base layers were obtained with permission from the ACT Government spatial database. Date 17 June 2024.



Stirling Park Grassy Ecosystem Restoration Plan - Central 1

- Existing Revegetation
- Weed Control
- Regeneration Area
- Track Works

0 0.01 0.01 0.03 Kilometers



Map prepared by Environmental Restoration Design & Planning. While all care is taken to ensure accuracy, it cannot be guaranteed that it is free from errors. Base layers were obtained with permission from the ACT Government spatial database. Date 17 June 2024



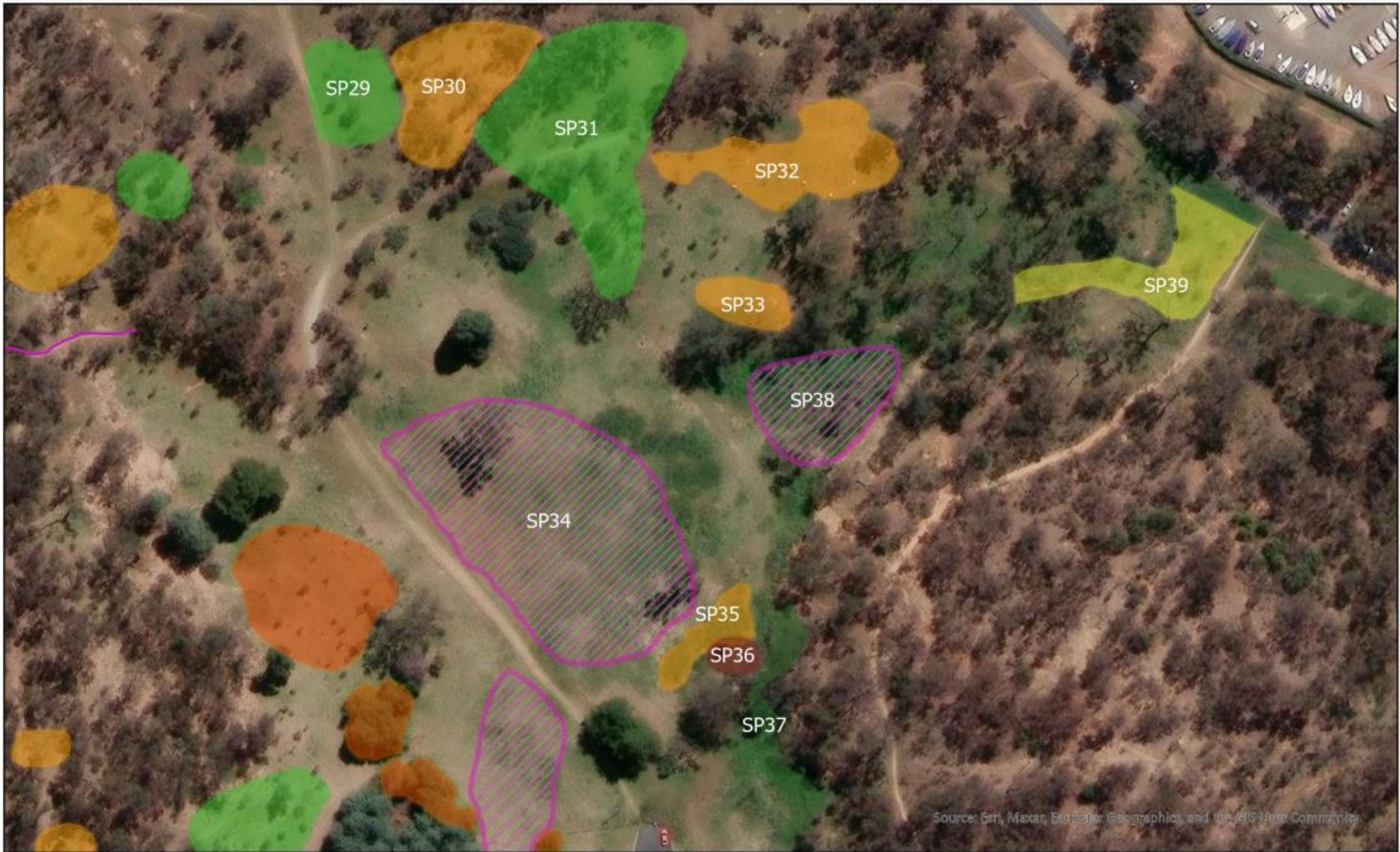
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Stirling Park Grassy Ecosystem Restoration Plan - South

- ERDP tidyPoints
- Existing Revegetation
- ▨ Non Specific
- Regeneration Area
- Revegetation Open Scattered
- Weed Control
- Woody Weeds



Map prepared by Environmental Restoration Design & planning. While all care is taken to ensure accuracy, it cannot be guaranteed that it is free from errors. Base layers were obtained with permission from the ACT Government spatial database. Date 17 June 2024



Stirling Park Grassy Ecosystem Restoration Plan - Central 2

- | | | |
|-----------------------|-----------------------------|-------------|
| Existing Revegetation | Revegetation Open Scattered | Woody Weeds |
| Non Specific | Revegetation Poa Carex | Track Works |
| Regeneration Area | Weed Control | |

0 0.02 0.04 0.07 Kilometers



Map prepared by Environmental Restoration Design & planning. While all care is taken to ensure accuracy, it cannot be guaranteed that it is free from errors. Base layers were obtained with permission from the ACT Government spatial database. Date 17 June 2024




Source: Esri, Maxar, Earthstar, GeoGraphics, and the GIS User Community

Stirling Park Grassy Ecosystem Restoration Plan - Central 2

- Existing Revegetation
- Revegetation Poa Carex
- Non Specific
- Woody Weeds
- Receneration Area



Map prepared by Environmental Restoration Design & planning. While all care is taken to ensure accuracy, it cannot be guaranteed that it is free from errors. Base layers were obtained with permission from the ACT Government spatial database. Date 17 June 2024

<i>Site</i>	SP1
<i>Description</i>	<p>This is an area of planted Tasmanian Blue Gums (<i>Eucalyptus globulus</i>) that are starting to regenerate into the reserve to the south and across Alexandrina Drive. The planted Blue Gums are well established and provide habitat for a variety of bird species. However, their aggressive rate of spread threatens native woodland condition. Although an Australian native, Tasmanian Blue Gums are an exotic species to the ACT, and they can regenerate quickly and out-compete slower-growing locally native species, particularly during periods of excessive rainfall.</p>  <p>Photo 1 Tasmanian Blue Gum regeneration in natural woodland – they are the dense blue coloured saplings to the right of the photo.</p>
<i>Actions</i>	Cut and dab all Tasmanian Bue Gum regrowth under 3m to contain spread before they have a chance to mature.
<i>Priority: Medium</i>	Retain mature Blue Gums as woodland bird habitat.
<i>Other Considerations</i>	Some strategic removal of older trees may be considered if resources become available, but this needs to be undertaken gradually to reduce impacts on wildlife using the trees and is a low priority with respect to other activities.

Site	SP2
Description	This is a cleared area approximately 0.4ha in size that is currently slashed by NCA. Groundcover is dominated by exotic weed species such as Chilean Needle Grass (<i>Nassella neesiana</i>), Paspalum (<i>Paspalum sp.</i>) and African Lovegrass, although patches native grass and forb species persist. Species include Wallaby Grass (<i>Rytidosperma sp.</i>) and Common Everlasting Daisies (<i>Chrysocephalum apiculatum</i>) among others. The current mowing regime keeps vegetation very short (less than 100 mm), which hinders the regeneration of native perennial groundcover regeneration and facilitates the spread of grassy weeds by leaving bare areas.
Actions Priority: Medium	Review and modify the mowing regime if possible, to foster natural regeneration of native groundcover species. Ideally slashing should be conducted when native species are not in a critical stage of their phenological cycle i.e. flowering or setting seed. Slashing in late summer is recommended for C3 grass dominated areas and should not be cut shorter than 150mm. Care should also be taken not to spread grass weeds further via mowing equipment, although it is recognised that this is difficult when there is a mixture of weeds and native grasses in the same location. Grass weeds should ideally be treated by spot spraying three times per year (winter for African Lovegrass, spring for Paspalum and summer for Chilean Needlegrass) to ensure effective control. Chemical control (spot spraying) is recommended for grass weeds.
Other Considerations	Any changes to the mowing regime will need to be incorporated into the mowing program which will require liaison with operations managers.

Site	SP3
Description	This is a large area of grass weeds (mostly Chilean Needlegrass) that is threatening patches of intact woodland. Woodland condition is otherwise healthy and includes populations of critically endangered Button Wrinklewort. Therefore, aggressive weed species such as Chilean Needlegrass are a high priority for control.
Actions Priority: Very High	Reduce the footprint of Chilean Needle Grass and other grassy weeds, prioritising protection of the Button Wrinklewort population and areas with lower numbers of plants to stop further spread. Careful biannual spot spraying using Flupropanate is recommended, with ongoing follow up each year to a reduced extent as part of a strategic program.
Other Considerations	Ensure weed sprayers are able to identify potential Button Wrinklewort to avoid any off target spraying impacts. This includes identification of individual plants outside flowering periods.

Site	SP4, SP5, SP6, SP7, SP8
Description	These areas consist of five small groves of planted mature English Oak (<i>Quercus robur</i>) that are regenerating prolifically and encroaching on new native plantings and intact patches of woodland. The Oaks have been planted along Alexandrina Drive and Hopetoun Circuit for amenity and are preventing grassland fauna species (such as Golden Sun Moth) from migrating between reserve due to the large amounts of deciduous leaf litter. This litter can also be harmful to water quality when washed into riparian areas. Although the NCA has agreed to remove some, Oaks regenerate prolifically, and their acorns can be easily spread into nearby intact bushland by birds. It is recommended they are progressively removed entirely. Their removal would also help provide a potential habitat link to the adjacent Black Street Grassland.



Photo 2 Mature Oak Trees producing large amounts of litter and regenerating profusely.

Actions

Control Oak regeneration via a mixture of cutting and dabbing, overspray and / or mowing depending on the size of the plants.

Priority: Low

Identify areas where mature Oaks need to be retained for shade and amenity and seek to strategically replace up to 20% of the remaining mature trees with native plants each year via stem injection and / or felling. English Oaks may resprout from stumps after cutting and therefore chemical treatment needs to be applied quickly.

Stump grinding or removal may be required for aesthetics in some areas.

Other Considerations

Monitor sites for invasive weed species where Oaks are controlled and manage these as a high priority. Do not undertake an Oak control program without developing a strategic plan which incorporates community perceptions, potential impacts and ongoing maintenance.

<i>Site</i>	SP9 and SP10
<i>Description</i>	These areas are former pine forests which are in the process of being restored to native woodland. The pines were removed and several hundred trees planted to replace them. The groundcover layer is dominated by weedy grass species such as Chilean Needle Grass, African Lovegrass and Paspalum, along with woody weeds such as Pines (<i>Pinus radiata</i>), Oaks and Sweet Briar (<i>Rosa rubiginosa</i>) which need to be continually managed to tip the balance in favour of native species.
<i>Actions</i> <i>Priority: High</i>	Control grassy weed species to reduce threats to revegetation efforts. Grass weeds should be treated three times per year (summer for African Lovegrass, spring for Paspalum and winter for Chilean Needlegrass) to ensure effective control. Chemical control via spot spraying is recommended. Woody weeds should be treated using the cut and dab method.
<i>Other Considerations</i>	Maintenance of sites with previous investment such as these, are one of the highest priorities for action to ensure that restoration outcomes are successful, particularly when attempting to improve the condition of highly degraded sites.

<i>Site</i>	SP11
<i>Description</i>	Located near Attunga Point, this area is a popular fishing spot for local enthusiasts. There is an illegal 4WD track extending approximately 600m which users have created. Over time, the track has become heavily eroded, with large rills formed in some areas. In response, 4WD users have created alternative routes around the damaged sections, further expanding the area of erosion and preventing groundcover from establishing. Riparian woody weeds such as Box Elder and willows are present along the shoreline of Lake Burley Griffin and there are historic records of Alligator Weed.
<i>Actions</i> <i>Priority: High</i>	<p>Either formalise access to Attunga Point by improving the quality of the track and rehabilitating secondary tracks or close it off to the public by placing a gate, large logs or bollards.</p> <p>Control track erosion by applying a mixture of jute logs, woody debris of different sizes and / or grass seeding. The jute logs and woody debris will trap sediment and seeds, promoting vegetation growth and helping expedite the restoration process. Mulch the track in flatter sections to protect bare ground and promote groundcover regeneration.</p> <p>Monitor and control riparian weeds. Smaller Box Elder and willows can be removed using the cut and dab method. Cut the stumps close to the ground and apply herbicide immediately (within 30 seconds) to ensure a good kill rate. Paint both ends as live material left on site can sprout and establish. Monitor willows every 3 – 6 months and follow-up as necessary.</p>
<i>Other Considerations</i>	Monitor and control priority weeds in association with restoration activities.

<i>Site</i>	SP12
<i>Description</i>	This is a large, cleared area with severe infestations of grassy weed species such as African Lovegrass, Chilean Needlegrass and Paspalum. Although infested and degraded, this area has been flagged as a restoration site, to link habitat and two adjacent Button Wrinklewort Populations. Restoration here is more feasible here than other heavily infested sites, due to its higher, dryer and more skeletal soils.
<i>Actions</i> <i>Priority: Medium</i>	Continue to remove invasive weeds through targeted chemical application (spot spraying), manual removal, or staged slashing, ensuring minimal soil disturbance. Improve soil conditions by applying low-nutrient mulch and using erosion control measures like woody debris. Once weeds are suppressed, reintroduce Button Wrinklewort and native grasses

	using locally sourced seed or tube stock. Monitor regularly, remove emerging weeds, and maintain buffer zones to prevent reinfestation.
<i>Other Considerations</i>	Button Wrinklewort is highly vulnerable to grazing due to its palatability and sensitivity to soil disturbance. Protection from grazing animals may be required in restored areas to prevent damage from hares and kangaroos. Temporary fencing or mesh guards can be used to reduce browsing pressure, while strategic population management may be needed in heavily grazed sites. Regular monitoring and adaptive management will help ensure successful plant establishment.

<i>Site</i>	SP13
<i>Description</i>	This is another large, cleared area with severe infestations of grassy weed species such as African Lovegrass, Chilean Needlegrass and Paspalum.
<i>Actions</i> <i>Priority: Medium</i>	It is not feasible to eradicate all weeds in this area so the strategy should be to ensure they don't spread any further, to reduce their footprint over time in line with resources and to protect natural assets of value (e.g. patches of native grasses and forb species or uncommon species). Weeds should be treated by spot spraying three times per year (winter for African Lovegrass, spring for Paspalum and summer for Chilean Needlegrass) to ensure effective control.
<i>Other Considerations</i>	Planting or seeding with hardy native grasses would be beneficial following weed control if resources allow, but it will take some time for conditions to be suitable for native plants and ongoing maintenance will require a large effort. Plantings would also need to consider ongoing access for follow up weed control.

<i>Site</i>	SP14
<i>Description</i>	This is in an area of regenerating woodland after the removal of an extensive <i>Cotoneaster</i> (<i>Cotoneaster sp.</i>) infestation. It is recovering well in all structural layers including native groundcover. However, there are several patched Oven's Wattle (<i>Acacia pravissima</i>) regrowth starting to establish. These are an invasive native species not local to the area and are replacing the space left by the <i>Cotoneaster</i> removal. As a natural coloniser they regenerate easily and are also spread by birds into other conservation areas where it can quickly take over, outcompeting desirable species and reducing biodiversity.



Photo 3 Recovering woodland with Ovens Wattle regeneration (foreground on right).

Actions

Priority: Very High


Gradually thin Oven's Wattle by cutting and dabbing seedlings under 2m tall in the first instance. Remove up to 30% of mature plants a year for 3-4 years with a view to eradication within a 5 year period.


Strategic removal is important as Oven's Wattle provide habitat for small woodland birds. Continue to follow up Cotoneaster control also.

Other Considerations


Oven's Wattle seed has a long dormancy period and can stay viable in the seed bank for many decades. Ongoing follow up will be required.

This is a good volunteer activity.

<p><i>Site</i></p>	<p>SP15</p>
<p><i>Description</i></p>	<p>This site comprises approximately 150 metres of informal walking track heading up the towards the ridge which is eroding. There are deep rills forming which are causing soil loss and creating a hazard for walkers.</p>  <p>Photo 4 Recovering woodland with Ovens Wattle regeneration (foreground on right)</p>
<p><i>Actions</i></p> <p><i>Priority: Medium</i></p>	<p>Reshape and armour rills with rock to fill and stabilise the soil. Ideally, drainage would be addressed through the construction of diversion banks to redirect water. However, while the construction of a formalised track may not be a current priority and resources may be allocated elsewhere, it should still be assessed by the NCA. Notably, the NCA has previously invested extensively in track work, including the installation of earthen rollover drains. Ongoing maintenance of these existing drains and any new drains is necessary.</p>
<p><i>Other Considerations</i></p>	<p>The area has a high density of Button Wrinklewort so if any works are planned, these will need to be protected and carefully monitored.</p>

<i>Site</i>	SP16 and SP17, SP20 and SP21
<i>Description</i>	These are areas of dense Chilean Needle Grass infestations that are threatening areas of otherwise intact woodland and an area with a particularly high-density population of Button Wrinklewort (SP17).
<i>Actions</i> <i>Priority: High</i>	<p>Prioritise Chilean Needlegrass for control to prevent further spread and reduce its footprint, particularly in the vicinity of Button Wrinklewort populations (SP17). Careful biannual spot spraying with Fluproponate is recommended, with ongoing follow up each year to reduce extent as part of a strategic program. Also monitor encroachment of woody weeds and control as necessary.</p>  <p>Photo 5 Chilean Needle Grass</p>

<i>Other Considerations</i>	Ensure weed sprayers can identify potential Button Wrinklewort to avoid any off target spraying impacts. This includes identification of individual plants outside flowering periods. Weed control must also be carried out on still days to reduce the risk of spray drift.
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<i>Site</i>	SP18 and SP19
<i>Description</i>	<p>These are two native groundcover plots planted by Greening Australia several years prior. The plots are surviving well, with many of the planted species still thriving. Small amounts of Chilean Needlegrass is beginning to encroach onto the plots and threaten revegetation efforts so is a very high priority for control.</p>  <p>Photo 6 Groundcover revegetation plots. Note the encroachment of Chilean Needle Grass.</p>
<i>Actions</i>	Prioritise Chilean Needlegrass for control. Targeted application of Fluproponate (spot spray) is the preferred treatment method, but extra care needs to be taken within revegetation which may require hand removal of plants close to desirable species.
<i>Priority: Very High</i>	
<i>Other Considerations</i>	Incorporate annual control into works programs for the Park to protect previous investment.

<i>Site</i>	SP22
<i>Description</i>	This is a large dirt carpark to the south of the reserve used by park users and attendees at a nearby Mosque. Run-off has caused erosion with deep rills and potholes causing sediment,

litter and pollutants to be washed from the carpark into the reserve. The carpark is also slowly expanding into the park, as use exceeds car park capacity.



Photo 7 Eroding car park.

<p><i>Actions</i></p> <p><i>Priority: High</i></p>	<p>Reseal the carpark and install adequate drainage to redirect run-off into more suitable areas. Install chain barriers or bollards around the carpark to prevent people parking in the reserve.</p>
<p><i>Other Considerations</i></p>	<p>Liaise with carpark users prior to implementing works plans to determine their needs and to help decide the best course of action to address carpark capacity and use. Overflow parking options (e.g. along the road) may need to be considered at peak Mosque service times.</p>

<p><i>Site</i></p>	<p>SP23</p>
<p><i>Description</i></p>	<p>This is a mown strip of grassy weeds that runs along Empire Circuit down to the historic residence of Westlake. It provides a fire break between bushland and residences on Empire Circuit. This area is of low ecological value, devoid of any canopy or mid-storey species and groundcover is dominated by exotic grass and weeds such as Prairie Grass and African Lovegrass. The area is adjacent to groves of planted European Ash (<i>Fraxinus excelsior</i>) (SP26) that are starting to establish in the strip but are kept under control by mowing.</p>



Photo 8 Mown Grassy Strip.

<p><i>Actions</i></p> <p><i>Priority: Low</i></p>	<p>Continue mowing to maintain this strip as a firebreak. Restoration of ecological values is not feasible in terms of cost-benefit and bushfire management, and resources would be better invested elsewhere. Priority grass species, such as African Lovegrass and Chilean Needle Grass, should continue to be managed to prevent their seeds from spreading into high-quality woodland. Grass weeds should be treated three times per year (summer for African Lovegrass, spring for Paspalum and winter for Chilean Needlegrass) to ensure effective control. Chemical control (spot spraying) is recommended. Any emerging Woody weeds should be treated using the cut and dab method.</p>
<p><i>Other Considerations</i></p>	<p>None.</p>


<p><i>Site</i></p>	<p>SP24, SP25, SP26</p>
<p><i>Description</i></p>	<p>These are three groves of regenerating European Ash (<i>Fraxinus excelsior</i>) which is an environmental weed in the ACT due to its prolific seed production, rapid growth and its ability to alter ecosystems. Its extensive root systems easily outcompete native plants and dense deciduous leaf litter suppresses native groundcover regeneration.</p>



Photo 9 European Ash mature trees and regeneration.

<p><i>Actions</i></p> <p><i>Priority: Medium</i></p>	<p>Thin European Ash groves by controlling regeneration and begin the process of reducing the number of mature trees over the next 5 years. Control no more than 20% of mature trees each year to allow wildlife using them to adapt, to reduce the risk of erosion and to enable control of other weeds which may encroach with the additional light and disturbance. Saplings should be cut and dabbed with Glyphosate. European Ash can easily resprout if not properly killed. It is essential to apply chemical to stumps within 30 seconds of cutting.</p>
<p><i>Other Considerations</i></p>	<p>Monitoring and follow-up treatment will need to be carried out for at least 5 years after removal due to its long seed viability.</p>

<p><i>Site</i></p>	<p>SP27</p>
<p><i>Description</i></p>	<p>This area has undergone considerable Chilean Needlegrass control and is now supporting regenerating populations of Button Wrinklewort. It is a great example of successful restoration of an endangered species in the face of considerable threat. The area is flanked by exotic and weed grass species, as well as the regenerating European Ash groves mentioned in SR26 so ongoing vigilance is required.</p>
<p><i>Actions</i></p> <p><i>Priority: Very High</i></p>	<p>Closely monitor this area for Chilean Needlegrass or woody weed encroachment, to ensure the Button Wrinklewort population is protected ongoing. As weed loads are currently low, manual removal is the recommended treatment method as to avoid damage to off-target species.</p>
<p><i>Other Considerations</i></p>	<p>This experience should be written up and used to inform Government, environmental organisations and volunteers as it is a useful learning opportunity.</p>

<i>Site</i>	SP28
<i>Description</i>	<p>This is an area dominated by exotic vegetation including European Ash and English Oak as the dominant overstorey, and Phalaris and Prairie Grass dominating the ground layer. Chilean Needlegrass and African Lovegrass are also present in dense infestations. This area is adjacent to intact woodland with healthy populations of Button Wrinklewort.</p>  <p>Photo 10 Exotic-dominant area adjacent to intact woodland.</p>
<p><i>Actions</i></p> <p><i>Priority: Medium for weed containment, low for revegetation.</i></p>	<p>Contain Chilean Needle Grass to its current footprint to prevent it from spreading into adjacent woodland. Identify a 'line of defence' from which to prioritise effort. However, all African Lovegrass should be treated to prevent invasion rather than merely contained.</p> <p>This is a good area to consider for revegetation if resources allow. Scattered trees and clumps of shrubs could be planted, noting that hardy species would need to be used to maximise the chance of survival in such a modified area. Species may include Yellow Box, Red Box, Blakely's Red Gum, Lightwood, Silver Wattle, Austral Indigo and others that are known to survive from other revegetation projects in the area. While it would be nice to plant forbs and grasses, it is likely that soil nutrients will be too high and competition too strong for successful establishment without a large amount of site preparation and ongoing maintenance. All plants should be guarded with 600mm corflute or reinforced cardboard eco or green-pods noting that the latter break down very quickly.</p>
<i>Other Considerations</i>	<p>Revegetation in this area would be a good volunteer 'Adopt a Patch' activity. It will need someone dedicated to maintaining it ongoing.</p> <p>Liaise with land managers to obtain agreement as mowing regimes may need to be amended.</p> <p>Dial before you dig and seek Heritage approval if required.</p>

<i>Site</i>	SP29 and SP31
<i>Description</i>	<p>These are areas with high biodiversity value that have been the focus of restoration work by FOG. Activities have mostly focused on the control of Chilean Needle Grass to protect groundcover diversity including an array of native grasses and forbs such as Button</p>

Wrinklewort and Lemon Beauty Heads (*Calocephalus citreus*). These areas are proximate to mown access tracks and Alexandrina Drive.



Photo 11 High quality woodland area.

Actions


Priority: Very High


Closely monitor and control weeds as the highest priority. Grassy weeds are most likely to be introduced from roadsides and tracks, with mowing activities potentially aiding their spread.

As weed loads are currently low, manual removal would be the preferred treatment method to avoid damage to off-target species. However, given practical constraints, targeted chemical application (spot spray) is the more viable approach.

Other Considerations

Ensure mowers are cleaned when moving between sites to avoid weed seed spread.

<p><i>Site</i></p>	<p>SP30, SP32 and SP33</p>
<p><i>Description</i></p>	<p>These areas contain severe infestations of Chilean Needlegrass which is threatening high quality restored woodland (SR28 and SR30).</p>  <p>Photo 12 Chilean Need Grass spreading into woodland restoration areas.</p>
<p><i>Actions</i></p> <p><i>Priority: High for weed containment, Low for revegetation.</i></p>	<p>Prioritise Chilean Needlegrass for control in this area. Targeted application of Fluproponate (spot spray) is the preferred treatment method. Ensure the spread of Chilean Needlegrass and other priority weeds (including woody weeds) are closely monitored to prevent spread into high quality woodland areas.</p> <p>This is a good area to revegetate with 20m x 20m clumps of native grasses and hardy forbs 30m apart to provide competition for sprayed weeds and to connect SP28 and SP30. Site preparation will need to include knock down spraying, soil cultivation and mulching, and ongoing maintenance will be critical for success (and will need to be fully resourced). This would be a good volunteer project due to the easy access and opportunity to make a significant difference.</p>
<p><i>Other Considerations</i></p>	<p>Ensure weed sprayers and contractors are experienced in plant identification and can identify Button Wrinklewort to avoid any off target spraying. This includes identification outside its flowering period.</p>

<p><i>Site</i></p>	<p>SP34</p>
<p><i>Description</i></p>	<p>This is a large, cleared area of low biodiversity value in the vicinity of the former historic Westlake Settlement. The groundcover is dominated by Chilean Needlegrass and Phalaris, and overstorey consists of exotic trees such as Cypress (<i>Cupressus sp.</i>), English Oak and European Ash which is reflective of its rich European heritage. There are several historic relics including antique gates and the planted exotic trees which must be conserved.</p>  <p>Photo 13 Westlake Settlement area.</p>
<p><i>Actions</i></p> <p><i>Priority: Low</i></p>	<p>Due to the low biodiversity value and high heritage value, this area is suited to being developed for visitor use rather than being managed for biodiversity. This may include the addition of facilities such as picnic tables, BBQ's, shelter and / or additional signage if appropriate.</p> <p>While the current mowing regime should continue, much of the Westlake area is not currently mown. Targeted chemical application (spot spray) used to reduce weed spread, support recreation, and serve as a firebreak. Target slashing around the Westlake Settlement should continue.</p>
<p><i>Other Considerations</i></p>	<p>The future of the old heritage trees will need to be considered as some near the end of their lifespan. As has been the current practice, they should be left to naturally senesce, with</p>

plans in place for managing woody debris once they die. Additionally, an integrated weed control approach should be implemented to address the spread of minor exotic weeds, such as exotic violets, vinca, and exotic grasses. This approach should combine targeted spot spraying for efficient control, manual removal in sensitive areas to protect native vegetation, and regular mowing or slashing to prevent seed set and further encroachment.

Site **SP35 and SP36**

Description

These are areas of dense weed infestation that are threatening restoration efforts around an old Eucalypt tree. Serrated Tussock, Chilean Needlegrass, African Lovegrass and Blue Periwinkle (*Vinca minor*) are dominating, and several woody weed species such as Blackberry and Sweet Briar are starting to reestablish. In spite of the pressure, the planted trees are surviving well, but weeds need to be managed around them before they become engulfed.




Photo 14 Planted trees being overrun by Blue Periwinkle.

Actions

Control weeds around planted trees and existing native vegetation to promote their survival. Contain the footprint of grassy weeds and eradicate the Blue Periwinkle as a high priority as it will continue to spread. It is a vigorous groundcover which spreads through both stolons and seeds, making eradication difficult. A combination of chemical and manual control will be required along with persistent follow up. It should first be sprayed in spring when foliage is vigorous, and the plant is most susceptible. After the effects of the chemical have become obvious (several weeks), the remaining vines will need to be removed manually, ensuring as

Priority: High

	much of the root system is removed as possible. Regular monitoring will need to be conducted for the next 6 – 12 months and any new sprouts treated with targeted chemical application. Deploy mulch to suppress regrowth of weeds and extend plantings done in SR35.
<i>Other Considerations</i>	Vines removed from Blue Periwinkle control should be bagged and removed from site to avoid resprouting and further spread into Haines Creek.

<i>Site</i>	SP37
<i>Description</i>	<p>This area encompasses revegetation work done along Haines Creek. Large amounts of Blackberry have been removed, followed by planting of Tall Sedge (<i>Carex appressa</i>) and River Tussock (<i>Poa labillardieri</i>). These have established well, noting that Blue Periwinkle, Paspalum and Tall Fescue are also doing well and require follow up control. This project is a great example of what can be achieved to improve riparian condition with a dedicated effort.</p>  <p>Photo 15 Successful Restoration of Haines Creek.</p>
<i>Actions</i>	Continue to build on the achievements to date by planting additional Tall Sedge and River Tussock down Haines Creek. Use a combination of manual removal and targeted chemical application to control Blue Periwinkle (outlined above in SP35 and SP36) and woody weeds.
<i>Priority: High</i>	
<i>Other Considerations</i>	Glyphosate is the only chemical registered for use in riparian areas.

<i>Site</i>	SP38
<i>Description</i>	This area contains an old rubbish dump from the original settlement and contains asbestos. The site is mostly buried, but debris and rubbish protrude from the surface and pollutants (if present) can wash directly into Haines Creek. The area is frequented by amateur archaeologists and people with metal detectors searching for artifacts from Canberra's

pioneering past. These activities leave large holes and cause soil disturbance areas which leaves the area susceptible to weed incursions. African Lovegrass, Serrated Tussock and Chilean Needlegrass are all present in this area and should be contained to their current footprint. Blue Periwinkle should also be sprayed as a high priority.



Photo 16 Old tip site with Blue Periwinkle starting to establish.

Actions

Priority: Medium

Avoid this area when undertaking restoration activities that are likely to disturb soil (e.g. digging). There is also a safety issue, and volunteers should be discouraged from working in the area.

Undertake chemical weed control to contain priority grass weeds (African Lovegrass, Chilean Needle Grass and Serrated Tussock) and Blue Periwinkle to avoid encroachment into intact areas, but otherwise this area is a low priority for action.

Other Considerations

An alternative approach could be to cover the site with clean soil or mulch and revegetate, which may help suppress weeds and improve site stability while reducing maintenance needs over time. Asbestos observations should be reported to the ACT government by calling 1800 326 148.

<i>Site</i>	SP39
<i>Description</i>	This area encompasses the downstream section of Haines Creek where it leaves the reserve to the north. The creek is well vegetated, but dominated by exotic grass species such as Paspalum, Prairie grass and Phalaris. Some priority grass species, such as Chilean Needlegrass and African Lovegrass are also present, but woody weeds are minimal due to work undertaken in the past.
<i>Actions</i> <i>Priority: High</i>	Continue control of woody weeds and contain priority grass weeds. As resources allow, continue the revegetation activities down the creek following on from SP37 and densely plant with Tall Sedge and River Tussock.
<i>Other Considerations</i>	Ensure resources are available for maintenance and ongoing weed control.

<i>Site</i>	SP40
<i>Description</i>	This is an area of high-quality woodland that has been the focus of considerable restoration efforts to suppress weeds and promote native vegetation regeneration. Due to the area's proximity to the road, incursions of weeds from the roadside are a constant threat and require ongoing monitoring and control.
<i>Actions</i> <i>Priority: Medium</i>	Closely monitor this area for new incursions by priority grass and woody weeds encroaching from the road and prioritise control in areas proximate to populations of Button Wrinklewort in the restoration area. As weed loads are currently low, manual removal would be the preferred treatment method to avoid damage to off-target species. However, given practical constraints, targeted chemical application (spot spray) is the more viable approach.
<i>Other Considerations</i>	Ensure weed sprayers and contractors are experienced in plant identification and can identify potential Button Wrinklewort especially when it is not flowering.

<i>Site</i>	SP41
<i>Description</i>	This area contains a grove of planted exotic English Elm (<i>Ulmus procera</i>) that is threatening areas of intact woodland and Button Wrinklewort populations to the south. English Elm is an aggressive environmental weed that spreads prolifically via suckering, which can emerge up to 15 – 20 metres away from the parent tree. Continued disturbance of suckers close to the parent tree, such as mowing, encourages suckers to travel even further. Over time, a single tree can form a dense thicket covering hundreds of square metres and in extreme cases pose threats to roads and drainage infrastructure. The Elms are part of an unmaintained carpark and biodiversity is low due to disturbance from cars and mowing.
<i>Actions</i> <i>Priority: Low</i>	Close the area to cars by installing bollards and control the Elms. Note that this is a low priority and will require considerable resources. This will require a combination of manual removal and chemical application. Trees should be felled and stumps treated with Glyphosate using a cut and dab method. Chemical must be applied to the cut stump within 30 seconds to ensure chemical uptake. Stump grinding without chemical control should be avoided as this can promote further suckering. Follow up will need to occur for 3 to 5 years and requires treatment of emerging suckers with target chemical application (spot spraying). Apply mulch to suppress further sucker growth. Plant native woodland canopy, mid-storey and groundcover species to replace them.

<i>Other Considerations</i>	As far as practical, avoid leaving English Elm material onsite as this can lead to further infestation.
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<i>Site</i>	SP42
<i>Description</i>	This area has undergone considerable weed control and is being restored into natural woodland. Infestations of Chilean Needlegrass and Phalaris have been targeted for control as well as woody weeds such as Cotoneaster and Cootamundra Wattle (<i>Acacia baileyana</i>). Due to the area's proximity to the road, incursions of weeds from the roadside are a constant threat and requires constant monitoring and follow up control.
<i>Actions</i> <i>Priority: High</i>	Closely monitor area for any priority weeds encroaching from the roadside to protect regeneration of Button Wrinkleworts in the restoration area.
<i>Other Considerations</i>	An historic apple tree is also located in this area, which should be left in situ for heritage value (upon request by the Westlake Residents Group).

<i>Site</i>	SP43
<i>Description</i>	This is a maintained strip running along Forster Crescent that supports a population of EPBC-listed Hoary Sunray (<i>Leucochrysum albicans</i>). The population is primarily concentrated on the mown strip adjacent to the footpath but also extends 20 to 30 metres into the woodland. Hoary Sunray thrives in disturbed, low-nutrient conditions, which also occur elsewhere in the reserve.
<i>Actions</i> <i>Priority: High</i>	Continue mowing the strip to allow for Hoary Sunray survival but alter it to promote regeneration. Specifically, mowing should be conducted when Hoary Sunray are not in a critical stage of their phenological cycle, such as when they are flowering or before they set seed. Slashing height should be raised to a minimum of 100mm to avoid damage to established plants.
<i>Other Considerations</i>	Ensure anyone undertaking activities in the area (especially weed sprayers) can identify Hoary Sunray to avoid impacts.

<i>Site</i>	SP44
<i>Description</i>	This area comprises the gully running north from Forster Crescent through the reserve to Alexandrina Drive. The woodland in the gully is in good condition. There are moderate but manageable infestations of Blackberry, Japanese Honey Suckle (<i>Lonicera japonica</i>) and Blue Periwinkle which are threatening intact woodland and Button Wrinklewort populations. Weed grass species such as Serrated Tussock and Chilean Needlegrass are present but not dominating (making them a high priority for control).
<i>Actions</i> <i>Priority: Very High</i>	Remove woody weeds (Blackberry, Japanese Honeysuckle, Blue Periwinkle) by using a combination of manual and target chemical application (spot spray). The cut and dab method should be used to treat Japanese Honeysuckle. Cut stems at the base, close to the root system and dab immediately with herbicide. In more manageable sections, remove vines carefully as not to damage host trees, cutting the vines instead of yanking them. Higher vines can be left to die off and wither naturally. Treat grass weeds using targeted chemical application (spot spray). Blackberry can be mown to the ground using a flail mower or similar, allowed to reshoot (6 weeks) then sprayed. Alternatively, goats can be used to control blackberry, however they can also be difficult to obtain and expensive depending on where they are sourced.
<i>Other Considerations</i>	The gully and the rest of the reserve heading west to the Chinese Embassy is a significant Ngunnawal cultural site and contains several significant artefacts. Any works should be

	carried out with close consultation with the Ngunnawal community to ensure appropriate measures are in place to protect important cultural values.
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<i>Site</i>	SP45
<i>Description</i>	This is a small section of NCA land that is not currently managed for conservation. Woody weeds, particularly Cootamundra Wattle, dominate and are potentially spreading into the reserve. Cootamundra Wattle is an invasive native species which threatens diversity due to its ability to aggressively spread. It quickly colonises areas of woodland and grassland and outcompetes our local Acacia and mid-storey species. It can also hybridise with other Acacia species, threatening the genetic integrity of local Wattles. Grass weeds such as Chilean Needlegrass are also present.
<i>Actions</i> <i>Priority: Low</i>	Strategically remove established and regenerating Cootamundra Wattle to prevent spread into woodland areas. Cootamundra Wattle should be controlled using cut and dab method for larger trees, and targeted herbicide application (spot spray) for smaller plants. Cootamundra Wattle seed can remain viable in the seedbank for decades, so ongoing monitoring and control will be needed to combat regrowth. Treat grass weeds with targeted chemical application (spot spray) and continue monitoring area for any new incursions.
<i>Other Considerations</i>	This is a low priority for action, but ensuring they do not spread into woodland areas is a high priority.

<i>Site</i>	SP46
<i>Description</i>	This area is a small section of NCA land that is not currently managed for conservation. The woodland condition here is good, although groundcover weeds such as St John's Wort (<i>Hypericum perforatum</i>), Chilean Needlegrass, and African Lovegrass are present. Additionally, while it is not NCA land, the woodland between SP46 and Gurubung Dhaura should be acknowledged, particularly in relation to woody weed regeneration issues. As Friends of Grasslands (FOG) are actively working in this area, its management and restoration efforts should be considered in a broader conservation context.
<i>Actions</i> <i>Priority: Low</i>	Manage the area to promote woodland condition. Manage weeds using targeted chemical application (spot spraying) prioritising the protection of Button Wrinklewort populations if they occur.
<i>Other Considerations</i>	The area is situated in a significant Ngunnawal cultural site which contains several significant sites. Any works should be carried out with close consultation with the Ngunnawal community to ensure appropriate measures are in place to protect important cultural values.

1.1. Summary of Priorities for Gurubang Dhawura (Stirling Park)

Action	Priority	Area
Control priority groundcover / grassy weeds in intact high quality grassland and woodland areas.	Very High	SP3, SP9, SP10, SP18, SP19, SP27, SP29, SP31, SP42
Contain and control Blue Periwinkle and Japanese Honeysuckle (and other exotic species)	Very High / High	SP35, SP36, SP37, SP38, SP44
Control woody weeds (invasive native species and exotics)	Very High / High	SP1, SP14, SP37, SP42
Control priority groundcover / grassy weeds in intact high quality grassland and woodland areas.	High	SP16, SP17, SP20, SP21, SP30, SP32, SP33.
Undertake revegetation – swampy meadow	High	SP39
Contain grassy weeds	Medium	SP12, SP13, SP28, SP40, SP46
Undertake revegetation - woodland	Medium	SP28, SP, 30, SP32, SP33, SP41
Undertake revegetation – swampy meadow	Medium	SP37
Undertake track and / or carpark maintenance	Medium	SP11, SP15, SP22
Control woody weeds (invasive native species and exotics)	Low / Medium	SP4, SP5, SP6, SP7, SP8, SP24, SP25, SP26, SP39, SP41, SP45
Visitor services / interpretations signage	Low	SP34

2. Yarramundi Reach



Yarramundi Reach Grassy Ecosystem Restoration Plan - Overview

- | | | |
|-----------------------|------------------------|--------------|
| Rock Placement | Non Specific | Weed Control |
| Eucalypt Thinning | Regeneration Area | Woody Weeds |
| Existing Revegetation | Revegetation Poa Carex | |



ENVIRONMENTAL RESTORATION
DESIGN & PLANNING

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Yarramundi Reach Grassy Ecosystems Restoration Plan - North

- Eucalypt Thinning
- Woody Weeds
- Non Specific
- Weed Control



Map prepared by Environmental Restoration Design & planning. While all care is taken to ensure accuracy, it cannot be guaranteed that it is free from errors. Base layers were obtained with permission from the ACT Government spatial database. Date 17 June 2024



Yarramundi Reach Grassy Ecosystems Restoration Plan - Central

- | | | | | | |
|---|-----------------------|---|------------------------|---|--------------|
| + | Rock Placement | ▨ | Non Specific | ■ | Weed Control |
| ■ | Eucalypt Thinning | ■ | Regeneration Area | ■ | Woody Weeds |
| ■ | Existing Revegetation | ■ | Revegetation Poa Carex | | |

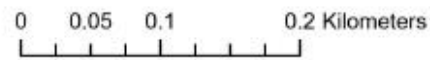


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Yarramundi Reach Grassy Ecosystems Restoration Plan - Southwest

- | | | | | | |
|---|-----------------------|---|------------------------|---|--------------|
| + | Rock Placement | ■ | Regeneration Area | ■ | Woody Weeds |
| ■ | Eucalypt Thinning | ■ | Revegetation Poa Carex | ■ | Weed Control |
| ■ | Existing Revegetation | | | | |



Map prepared by Environmental Restoration Design & Planning. While all care is taken to ensure accuracy, it cannot be guaranteed that it is free from errors. Base layers were obtained with permission from the ACT Government spatial database. Date 17 June 2024

<i>Site</i>	YR1
<i>Description</i>	This is an area with a dense infestation of African Lovegrass that is threatening the adjacent grassland.
<i>Actions</i> <i>Priority: High</i>	<p>Spray African Lovegrass with Fluproponate to contain it to its current footprint and prevent further spread into grasslands and woodlands. Identify a 'front line of defence' and work back from this as part of an annual weed control program to try to increase the buffer zone between high and low quality areas. Fluproponate is a selective residual chemical that kills seeds as well as plants. It is effective, but it can be expensive and hard to obtain. Glyphosate can also be used, but this does not kill seeds and is not selective.</p> <p>A combined approach can be undertaken by slashing the Lovegrass in spring before it sets seed then follow this up with targeted chemical control in late spring or summer when the plant is still actively growing. Remove slash at the time of mowing. Ensure regrowth after slashing reaches 10-20cm before chemical application. This is an effective option if burning has not been possible for multiple years.</p> <p>Treating severe infestations of Lovegrass such as this one takes an integrated and persistent approach, using a combination of mechanical and chemical control methods over many years. In cases like this one where the infestation is dense and widespread, an asset protection-based approach is recommended to maximise cost-benefit.</p>
<i>Other Considerations</i>	Avoid slashing without follow-up chemical control as it can encourage regrowth. Avoid burning as a control method for African Lovegrass as it regenerates quickly after fire and can dominate post-fire landscapes if not managed.

<i>Site</i>	YR2
<i>Description</i>	<p>This is a fenced strip of woody weeds adjacent to the road and includes Apple trees (<i>Malus sp.</i>), Blackberry, Cotoneaster and a number of invasive native species such as Cootamundra Wattle. Pasture is dominated by Phalaris and Cocksfoot (<i>Dactylis glomerata</i>), which is encroaching on nearby grassland areas.</p>  <p>Photo 17 Strip of woody weeds and exotic pasture.</p>

<p><i>Actions</i></p> <p><i>Priority: High</i></p>	<p>Due to their dominance in the fenced windbreak, removing and replacing exotic species with native species is not feasible. Efforts should instead be spent containing exotic species from further spread into adjacent native grassland.</p> <p>Remove woody weeds encroaching into grassland by employing a combination of manual removal, cut and dab and targeted chemical control (spot spraying) to control Blackberry. Use cut and dab methods to remove non-Callistemon species.</p> <p>Use brush-cutters to slash the exotic grasses adjacent to higher quality native grasses in early spring, before Phalaris and Cocksfoot set seed, to create a buffer and reduce likelihood of viable seed blowing into the grassland. As with YR1, identify a 'line of defence' from which to work to ensure maximum effort in areas which are going to have the most benefit.</p>
<p><i>Other Considerations</i></p>	<p>Ensure volunteers and contractors are experienced in plant identification and are able to differentiate between native and exotic grass species to avoid any off-target impacts.</p> <p>Potential to expand Sterile Rye trials along roadside verges to achieve clean, relatively weed-free boundaries.</p>

<p><i>Site</i></p>	<p>YR3</p>
<p><i>Description</i></p>	<p>This area has a dense infestation of St John's Wort which is threatening biodiversity values in the grassland. St John's Wort is a fast-growing invasive weed and prolific spreader that can regenerate via seed, stolons or root fragments. Its seeds can stay viable in the seedbank for 10 – 15 years, requiring consistent monitoring and follow-up control to successfully treat infestations. It responds particularly to areas of disturbance with low competition e.g. after drought or fire and once established is difficult to get rid of.</p>
<p><i>Actions</i></p> <p><i>Priority: Medium</i></p>	<p>Contain St John's Wort to reduce further threats to grassland areas. A combination of mechanical and chemical control is usually required, with ongoing follow up incorporated into work plans for several years. Plants can be sprayed when they are actively growing (with a pass up to three times per year), or slashed (mown) at frequent intervals with follow up chemical control. If slashing is used, ideally plants should be cut short to reduce the opportunity for seeding.</p> <p>Hand pull plants that are close to sensitive or threatened native species and entire plant is removed, including roots and stolons.</p> <p>Closely monitor the area seasonally on an ongoing basis and treat any re-emerging plants.</p>
<p><i>Other Considerations</i></p>	<p>Low pressure nozzles and shielded sprayers can be used to minimise herbicide drift and reduce risk to Natural Temperate Grassland (NTG).</p>


<p><i>Site</i></p>	<p>YR4 and YR12</p>
<p><i>Description</i></p>	<p>The northeastern half of YR4, closest to YR3, has been identified as a potential spray-and-sow site to restore native grasslands. This area is weedy, dominated by exotic grasses such as Phalaris and Cocksfoot, but is adjacent to high-quality grassland, making it a strong candidate for improving connectivity. The spray-and-sow method can effectively restore degraded NTG by removing competition and reducing the weed seed bank, however, it is a method that requires ongoing maintenance to control weeds. Ecological burns are a complementary tool to incorporate ie. burn, spray, spray again, then seed.</p>




Photo 18 Exotic grasses surrounded by good quality grassland.

<p><i>Actions</i></p> <p><i>Priority: Low</i></p>	<p>Conduct baseline vegetation surveys to map the different vegetation types (e.g. high, medium and low quality grassland and exotic grassland). Create a species list to identify which plants are doing well. Undertake a heritage check for cultural sites.</p> <p>Where cultural sites may occur, spray-and-sow is a suitable method of establishing native groundcover. Burn in autumn to knock down biomass and spray twice before overseeding the area by hand. Additional management actions should include the removal of exotic seeds, manual removal of smaller weeds, and periodic oversowing with native seeds to further enhance biodiversity. Monitor vegetation changes regularly, recording biomass levels, species composition, and soil health, and document progress with photo points. Monitor and manage weeds through targeted control, particularly in the first 12–24 months. Note that scrape and sow for grassland restoration is an option, however this causes significant disturbance to the soil and would need to be carefully assessed if it was to be considered, particularly in sites with cultural significance.</p>
<p><i>Other Considerations</i></p>	<p>Ensure funds are available for ongoing weed control and maintenance. Seed will need to be ordered well in advance as it is sometimes difficult to get, as are planning and approvals for ecological burns.</p>


Site	YR5
Description	This area has been identified as a potential site to expand on a trial biomass and weed control slashing site (refer to YR11). The area is dominated by Phalaris, but native species such as Kangaroo Grass (<i>Themeda triandra</i>) and Common Everlasting (<i>Chrysocephalum apiculatum</i>) are present and can potentially be expanded.
Actions Priority: Medium	Implement a trial slashing regime to assess its effectiveness in reducing biomass and controlling grass weeds while preserving NTG values. While much of YR5 has been slashed as a trial over the past five years, adapting the management into a more structured and well-monitored trial could provide valuable insights. Conduct baseline vegetation surveys to map the groundcover vegetation and assess the diversity of native species. Divide the site into plots, including control areas, and test different slashing regimes (e.g., varying cutting heights and frequencies). Time the slashing to minimize impact on native species, such as after seeding or during dormancy. Avoid using heavy equipment (such as a tractor and towed implement) to avoid crushing grasses and unnecessary soil disturbance. Monitor vegetation changes regularly, record biomass levels, species composition, and soil health, and document progress with photo points. Compare outcomes across treatments to identify the most effective methods. Adjust practices based on results to enhance native vegetation while suppressing Phalaris.
Other Considerations	This could be expanded and undertaken as part of an Honours project or similar.

Site	YR6, YR9, YR16, YR21
Description	<p>These are planted Eucalypt copses, primarily Ribbon Gum (<i>Eucalyptus viminalis</i>) and Tasmanian Blue Gum, which are regenerating and encroaching upon areas of NTG. Notably, the ground layer of YR16 is impressively rich in native forbs and grass tussocks. FOG have previously undertaken significant efforts to remove invasive Cootamundra Wattle, resulting in substantial ecological restoration. Currently, the area is managed through selective weeding.</p>  <p>Photo 19 Ribbon Gum regenerating into grassland areas.</p>

<p><i>Actions</i></p> <p><i>Priority: Medium</i></p>	<p>Thin Eucalypt regrowth in NTG areas by cutting and dabbing saplings before they have the chance to mature. Mature Eucalypts are providing shade, habitat and aesthetic value and should be left in place. To preserve the integrity of this diverse ground layer, it is crucial to keep machinery out of YR16 and continue with manual, selective weeding practices to manage eucalypt regeneration and prevent further encroachment into NTG areas.</p>
<p><i>Other Considerations</i></p>	<p>Both Ribbon Gum and Tasmanian Blue Gums can become a hazard as they get older and senesce. Some of these trees have the potential to become a future hazard overhanging the bike path and this should be considered when determining how best to manage them. This is particularly the case if they are allowed to continue to regenerate in the densities they are currently.</p>

<p><i>Site</i></p>	<p>YR7 and YR22</p>
<p><i>Description</i></p>	<p>These areas comprise the shoreline of Lake Burley Griffin and subsequent riparian zone. Riparian condition along the shoreline is poor and dominated by weed species such as Phalaris, Willow, and Poplar (<i>Populus</i> sp.). Alligator Weed is also present in small patches along the shoreline. Alligator Weed is a Weed of National Significance (WONS) and poses a significant threat to aquatic ecosystems due to its aggressive growth habits and ability to outcompete native species. Additionally, there are dense patches of Knife-leaf Wattle expanding in YR7.</p>  <p>Photo 20 Exotic plants establishing along the edge of the Lake.</p>
<p><i>Actions</i></p> <p><i>Priority: Very High</i></p>	<p>Alligator weed is a very high priority for control and needs to be treated with a combination of manual removal and chemical control. Remove plants manually by digging when water levels are low. Carefully bag and dispose any removed material. Avoid breaking stems and roots as small fragments can regrow. Follow up any remaining plants and regrowth with targeted chemical application (spot spray), using Glyphosate which is the only chemical approved for use along waterways. Restrict access to infested areas if possible, to prevent Alligator Weed from being spread by boats, machinery, people or animals. This may not be</p>

	<p>possible in a practical sense, but it is not a high-use area so may not be of great concern. Closely monitor areas every 6 – 12 months and continue to control as necessary.</p> <p>Control regeneration of Crack Willow and Poplars but retain older trees. Most of the willows in this area are only small and easily controlled, and therefore the cut and dab method is appropriate. Cut the stumps close to the ground and apply herbicide immediately (within 30 seconds) to ensure a good kill rate. Paint both ends as live material left on site can sprout and establish. Monitor willows every 3 – 6 months and follow-up as necessary.</p> <p>Additionally, manage the spread of Knife-leaf Wattle, which is expanding in YR7. Selective removal should be undertaken where it is encroaching on native vegetation, using the cut-and-dab method to prevent regrowth. Monitor regrowth periodically and apply further control measures as needed.</p> <p>Control any other woody weeds such as Blackberry, Briar and others as they occur.</p>
<i>Other Considerations</i>	Great care needs to be taken when using chemicals in riparian areas. Expert advice should be sought if there is any doubt.

<i>Site</i>	YR8
<i>Description</i>	<p>This is an area of exotic woody weeds including Box Elder and White Poplar that is threatening nearby NTG and riparian areas. The exotic tree species have formed a dense thicket and has become a harbour for hares, which are damaging native forbs in the grassland. Conversely, the thicket is also providing habitat for native birds, with a magpie nest observed during the site inspection.</p>  <p>Photo 21 Thicket of exotic and native plants providing habitat but also threatening NTG.</p>

<p><i>Actions</i></p> <p><i>Priority: Medium for regrowth, Low for mature trees.</i></p>	<p>Gradually work towards removing this thicket over time to protect NTG. Start by controlling regenerating (under 3 metres) Box Elder and White Poplar using the cut and dab method. Suckering (regeneration under 50cm) can be treated by spot spraying with an appropriate chemical such as Glyphosate if it is close to riparian areas.</p> <p>Begin the process to remove mature trees over the next 10 years. Removing large canopy species needs to be done gradually to accommodate native species relying on the Elder and Poplars as nesting trees. Generally, mature trees should be removed at a maximum rate of 30% per year to ensure a gradual transition. Follow-up spot spraying will be required to manage regenerating suckers. Continue to manage Blackberry and St John's Wort with selective chemical spraying as needed.</p>
<p><i>Other Considerations</i></p>	<p>The restored area would be a suitable area for seating and interpretive signage about NTG and their ecological importance.</p> <p>Liaise with NCA about how they want this area to look before undertaking works.</p>

<p><i>Site</i></p>	<p>YR10, YR13, YR15</p>
<p><i>Description</i></p>	<p>These areas, each approximately 0.003 hectares in size, were established by Greening Australia and are currently managed by Friends of Grasslands (FOG). They support a diverse array of native grasses and forbs, including species such as Hoary Sunrays and Native Flax (<i>Linum marginale</i>). Notably, there is a significant reduction in weed presence within these sites compared to the surrounding areas, a result of regular maintenance activities.</p> <p>Specifically, YR15 was part of Greening Australia's Grassland Challenge project approximately 15 years ago, where forb tube-stock was planted at wide spacings. This site has naturally retained its high-quality grassland, though FOG has recently undertaken efforts to hand-pull Ribbon Gum seedlings following a 2023 fire.</p> <p>Management practices for YR15 align with those implemented in YR10 and YR13, focusing on regular weeding and monitoring to maintain the ecological integrity of these grassland communities.</p>
<p><i>Actions</i></p> <p><i>Priority: Very High</i></p>	<p>Continue to monitor and maintain these plots. Establish fixed survey plots and photo points for consistent data collection over time. Conduct seasonal surveys to record plant species diversity, abundance, and coverage. Regularly compare data to original project goals to evaluate progress.</p>
<p><i>Other Considerations</i></p>	<p>Establishment of scrape and sow grassland restoration sites are very expensive and require a lot of ongoing maintenance. As a result, they are not widely established, and their use is still limited. Greening Australia can provide more specific information and as mentioned above, spray-and-sow is a preferable method when cultural heritage is a concern.</p>

<p><i>Site</i></p>	<p>YR11</p>
<p><i>Description</i></p>	<p>This is a thin slashed strip that has been set up as a trial site to determine the use of slashing for biomass management and weed control in the NTG. The strip is slashed every 12 months and seems to be having a positive effect, with higher native species diversity and less grass weed species recorded in slashed areas.</p>
<p><i>Actions</i></p> <p><i>Priority: High</i></p>	<p>Continue to slash every 12 months and monitor plots. Establish fixed survey plots and photo points for consistent data collection over time. Conduct seasonal surveys to record plant species diversity, abundance, and coverage. Regularly compare data to original project goals to evaluate progress.</p>
<p><i>Other Considerations</i></p>	<p>This trial should continue and if deemed successful, potentially expanded to other areas.</p>

<i>Site</i>	YR12
<i>Description</i>	YR12 like similar area YR4, already supports a reasonable cover of native grasses and some forb patches. Instead, it should continue to be managed using the existing approach, which includes an annual mow (raking slash when biomass is heavy), with additional cool burns in years when surrounding biomass is reduced, and targeted spot spraying to control exotic species. Additional management actions should include the removal of exotic seeds, manual removal of smaller weeds, and periodic oversowing with native seeds to further enhance biodiversity. This approach will maintain and improve the existing native vegetation while avoiding unnecessary disturbance.
<i>Actions</i> <i>Priority: Low</i>	Conduct baseline vegetation surveys to assess native and exotic species. Implement annual mowing, timed to prevent exotic species from seeding, and remove excess biomass post-mowing to promote native regeneration. Conduct prescribed cool burns to enhance native diversity and diminish the exotic seed bank. Employ targeted weed control through chemical application (spot spray) and manual removal to minimize competition. Periodically over-sow with native grass and forb seeds suited to the site's conditions to boost biodiversity. Regularly monitor vegetation changes to inform adaptive management strategies. This approach aims to maintain and enhance YR12 as a resilient native grassland ecosystem.
<i>Other Considerations</i>	Ensure funds are available for ongoing weed control and maintenance. Seed will need to be ordered well in advance as it is sometimes difficult to get.

<i>Site</i>	YR14
<i>Description</i>	<p>This is 0.2ha area of remnant Wet Tussock Grassland (or Swampy Meadow) associated with a channelised drainage line that receives runoff from Lady Denman Drive and extends down to the Lake (intersected by a bike path near the Lake). The gully is dominated by River Tussock, Tall Sedge and patches of Kangaroo Grass. It is relatively weed free, due to the efforts of FOG, with some St John's Wort and Phalaris in places but these are not present in large numbers. Wet Tussock Grasslands are part of the endangered Natural Temperate Grass community, with less than 5% of this grassland type remaining.</p> <p>FOG has actively managed this zone for years, significantly improving its condition. A major success has been the control of Blackberry. However, as noted in previous comments regarding weed sources in Block 31, ongoing vigilance is required. Efforts have also addressed the removal of Umbrella Sedge (<i>Cyperus eragrostis</i>) and large exotic tussocks, which are now under control. Plantings of Poa and Carex species have successfully thickened the vegetation, enhancing the ecological integrity of the area.</p>



Photo 23 Tall Sedge and River Tussock established in drainage line.

Actions
Priority: High

Closely monitor this wetland areas and remove threats as they arise. Conduct regular weed control (at least three times per year) to address threats from St John’s Wort and Phalaris. If resources allow, continue to plant Poa and Carex in wet areas to expand the Wet Tussock Grassland footprint.

Other Considerations

Channelisation has caused a small amount of erosion, but this is stabilising with good groundcover and is not expected to be an ongoing issue unless something adverse happens to the plant cover (e.g. drought, excessive hare numbers or burning). Given the upstream threats from Block 31 (Molonglo Valley, Section 0), which contains infestations of Blackberry, African Lovegrass, Chilean Needle Grass, Serrated Tussock, St John's Wort, and non-local Acacias, consideration should be given to implementing a control mechanism at the road to manage flow and reduce exotic seeds and pollution entering the grassland.

A riparian trap at the Lady Denman Drive verge, as previously proposed by FOG, could help slow water flow and filter runoff before it reaches the drainage line. Specifically, a filtration mechanism at the road and in the drainage line on the northern side of the building could further mitigate the impact of pollutants and weed seed dispersal into the high-quality grassland areas.

<i>Site</i>	YR17
<i>Description</i>	This 1.5-hectare area, identified as habitat for the Striped Legless Lizard (<i>Delma impar</i>), is in good condition and dominated by native C4 perennial grasses, including Kangaroo Grass (<i>Themeda triandra</i>) and Redleg Grass. The site also supports a variety of native forbs, such as Common Everlasting, Bluebells (<i>Wahlenbergia</i> spp.), Bulbine Lily (<i>Bulbine bulbosa</i>), and Blue Devil (<i>Eryngium ovinum</i>). However, invasive species like St John's Wort, Phalaris, Chilean Needlegrass, Tall Fescue, and Ribwort Plantain (<i>Plantago lanceolata</i>) are present, posing ongoing threats to biodiversity. Biomass in the area is currently managed through controlled burning, with the most recent burn occurring in 2024.

	<p>The area contains some rock cover; however, the density may not be sufficient to support a robust Striped Legless Lizard (<i>Delma impar</i>) population. While the presence of rocks provides essential shelter and thermoregulation sites, limited rock availability can lead to increased exposure to predators, reduced opportunities for temperature regulation, and fewer suitable nesting sites. These factors can negatively impact the health and sustainability of the lizard population. Kangaroo density and therefore grazing pressure is low at the present time, although hare numbers fluctuate. This is likely to increase during times of drought.</p>
<p><i>Actions</i></p> <p><i>Priority: High</i></p>	<p>Manage the quality of habitat for Striped Legless Lizard and continue to survey populations. Encourage the regeneration of native grasses, especially perennial species which provide vital habitat complexity.</p> <p>Implement an integrated weed management program, using a combination of targeted slashing and burning, and targeted chemical application (spot spraying) to control invasive species such as St John's Wort and Phalaris. Manual removal should be prioritised, with chemical control applied sparingly in areas with high forb diversity. Avoid using mechanical weed control methods like scraping and sowing, or heavy machinery such as boom sprayers, as these can disturb habitat.</p> <p>Maintain the current burning regime to control biomass, ensuring burns are conducted during the cooler months (June/July) and at intervals of 2–5 years. Patch or mosaic burning is preferred, as it helps preserve habitat diversity and maintains suitable areas for the Striped Legless Lizard.</p> <p>Deploy rocks to increase microhabitats for Striped Legless Lizard. Aim for 10-15% rock cover, this rate will provide sufficient habitat but won't overly fragment grassland connectivity. Closely monitor the area and remove any re-emerging weeds.</p>
<p><i>Other Considerations</i></p>	<p>This area requires adaptive management based on seasonal monitoring and decision-making needs to remain dynamic and timely. This may be something that FOG may need to keep on top of unless there is a dedicated person in the NCA to take on this responsibility.</p> <p>Refer to the Bushfire & Works Plan for National Capital Authority Estate – 2020-2022.</p> <p>Given the unknown status of Pink-tailed Worm-lizard (<i>Aprasia parapulchella</i>) populations, monitoring for any extant populations should be carried out. Conduct periodic surveys to detect its presence and assess population trends, using this data to refine conservation strategies for both Pink-tailed Worm-lizard and the Striped Legless Lizard.</p>

<p><i>Site</i></p>	<p>YR18</p>
<p><i>Description</i></p>	<p>This is the lower part of the wet tussock grassland drainage line (YR14) between the Lake and the bike path. This section of the gully is dominated by Phalaris and Chilean Needle Grass. Some native River Tussock and Tall Sedge patches persist and provide natural values which can be built on. Some woody weeds such as Hawthorn and small Willows are also present.</p>
<p><i>Actions</i></p> <p><i>Priority: Low</i></p>	<p>Control woody weeds to prevent them becoming established in this area, particularly Hawthorn, which is an aggressive riparian weed.</p> <p>Contain grassy weeds to their current footprint and consider slashing in early spring and autumn to keep their biomass low.</p> <p>A program of restoration could be developed by removing patches of Chilean Needlegrass and replacing them with Carex and Poa, however this is a labour intensive activity requiring ongoing care, and there are other higher priorities.</p>

<i>Other Considerations</i>	There is some natural regeneration of wetland tussock grasses in this area which is likely to continue as there is a source of seed from upstream.
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<i>Site</i>	YR20
<i>Description</i>	<p>This is an area of high-quality grassland with moderate infestations of St John’s Wort. The grassland is dominated by native perennial C4 species such as Kangaroo Grass and a diverse arrangement of native forbs including Blue Devil (<i>Eyringium obinum</i>).</p>  <p>Photo 24 Recently burnt high quality NTG.</p>
<i>Actions</i> <i>Priority: High</i>	<p>Control St John’s Wort and hold a ‘front line’ against Phalaris and woody weeds threatening to encroach into the high-quality areas. Slash the St John’s Wort to ground level during flowering to reduce seeding. Hand pull plants that are close to sensitive or threatened native species. When hand pulling, ensure entire plant is removed, including roots and stolons. Use target chemical application (spot spray) to treat remaining plants three times per year (holding treatment over winter). Conduct seasonal monitoring for any grass and woody weeds encroaching from YR18 and YR21, and any regenerating Eucalyptus species from YR19. Burning is a useful biomass management tool, noting that the nearby Eucalypts would need to be avoided. Alternatively, slashing is an option if burning can’t be carried out. Slashing should be carried out in late autumn.</p>
<i>Other Considerations</i>	<p>Low pressure nozzles and shielded sprayers can be used to minimise herbicide drift and reduce risk to NTG, but extreme care needs to be taken.</p> <p>Refer to the NCA Bushfire & Works Plan for National Capital Authority Estate – 2020-2022.</p>

2.1. Summary of Priorities for Yarramundi Reach

Action	Priority	Area
Control priority groundcover / grassy weeds in intact high quality grassland and woodland areas.	Very High	YR14, YR17, YR15
Control Alligator weed, Serrated Tussock and African Love Grass.	Very High	YR7, YR22, YR1, YR2, YR3, YR18
Maintain existing scrape and sow sites.	Very High	YR10, YR13
Contain African Love Grass and other grassy weeds.	High	YR1, YR2, YR3, YR18
Contain and control St John's Wort (sensitive areas).	High	YR14, YR20
Undertake burning for biomass management.	High	YR17, YR20
Control woody weed regeneration (including native invasive species).	Medium	YR6, YR7, YR 8, YR9, YR16, YR18, YR21
Undertake trail slashing for biomass management and weed control.	Medium	YR5, YR11
Undertake revegetation – swampy meadow.	Medium	YR14
Reestablish and expand grasslands through spray and sow method.	Low	YR4, YR12
Control mature woody weeds (including non-local natives).	Low	YR8

3. Guilfoyle Street, Yarralumla



Source: EarthMaxar, Earthstar Geographics, and the GIS User Community

Guilfoyle Street Grassland Grassy Ecosystems Restoration Plan - Overview

- Eucalypt Thinning
- Weed Control
- Woody Weeds

0 0.01 0.02 0.04 Kilometers





Map prepared by Environmental Restoration Design & planning. While all care is taken to ensure accuracy, it cannot be guaranteed that it is free from errors. Base layers were obtained with permission from the ACT Government spatial database. Date 17 June 2024

<i>Site</i>	GS1, GS2, GS3
<i>Description</i>	This is a small low-quality grassland that occupies a small (0.8ha) wedge of NCA land of located between Guilfoyle Street and Adelaide Avenue in Yarralumla. Although the grassland is dominated by grassy weeds such as African Lovegrass and Chilean Needle Grass, native grasses are still present and include Kangaroo Grass, Wallaby Grasses and Spear Grasses which provide natural values upon which to build. The area is flanked by a row of planted Eucalypts along Adelaide Avenue which are at risk of encroaching into the grassland. There are historic records of Button Wrinklewort populations in this area, however none were observed during a site visit. This may be due to regular mowing keeping groundcover plants short.
<i>Actions</i> <i>Priority: Low</i>	<p>Control grass weeds and restore the area back to NTG as resources allow.</p> <p>Use a combination of strategic slashing, raking of thatch and targeted chemical control (spot spraying) to treat grass weeds three times per year to ensure adequate treatment of all grass weed species.</p> <p>Monitor the boundary near planted Eucalypts and remove any saplings (cut and dab method) regenerating in the grassland.</p> <p>Plant suitable native grassland species such as Kangaroo Grass and Wallaby Grasses, as well as forb species such as Blue Devil and Native Flax to increase native grassland species representation and diversity. Site preparation would need to include knock down spraying, spot cultivation and mulching as well as ongoing weed management. Native grass seeding could also be considered. Note that the relative effort versus outcome would be high but may be a good demonstration site for grassland restoration.</p> <p>Cool burning could be implemented to manage biomass if appropriate (with regards to bushfire management operations plans). It is a preferable option if regular mowing is causing the grassland values to degrade and facilitating the spread of weeds. In this scenario slashing to be used only as a form of weed control to treat grass weeds species before they set seed.</p>
<i>Other Considerations</i>	<p>The verge that is densely infested with African Lovegrass along Guilfoyle Street is a good area to implement a trial scrape and sow site to measure its effectiveness in combating this threat. Button Wrinklewort reintroduction could also be considered as resources allow. A high level of investment in maintenance would be required.</p> <p>This is not a high priority in terms of grassland conservation more broadly, but its location offers good opportunities for education and ongoing plant trials, particularly if someone in the local community was willing to adopt the care of the site ongoing. Alternatively, this site might be a priority as an offset for the proposed development of Light Rail stage 2b to Woden.</p> <p>Refer to the Bushfire & Works Plan for National Capital Authority Estate – 2020-2022</p>

4. State Circle Woodland



State Circle Woodland

-  Regeneration Area
-  Weed Control

0 40 80 160 Meters



Map prepared by Environmental Restoration Design and Planning. While all care is taken to ensure accuracy, it cannot be guaranteed that it is free from errors. Base layers were obtained with permission from the ACT Government spatial database. Date: 12th December 2025

<i>Site</i>	SC1, SC2, SC3
<i>Description</i>	This is a disconnected patch of high-quality woodland between State Circle and Capital Circle, west of Capitol Hill (Section 2 Block 1). Native vegetation in the woodland is well represented across all three structural layers and supports a small population of Button Wrinklewort. There is regrowth of numerous woody weeds such as Cotoneaster and Cootamundra Wattle, removed by FOG volunteers, and groundcover weed species such as St John's Wort, African Lovegrass and Chilean Needle Grass. The perimeter of the area is heavily mown, which sometime encroaches too far into the conservation area.
<i>Actions</i> <i>Priority: High</i>	<p>Control woody and priority grassy weeds, as well as Blue Periwinkle to reduce threats to the Button Wrinklewort population. Woody weeds are still small and not dominating, so can be removed using a cut and dab method. These are very high priority to prevent future impact. Groundcover weeds should be treated using a combination of manual removal and targeted chemical application (spot spray) to reduce damage to off target species.</p> <p>Install Conservation Area posts to deter slashing and closely monitor extent of Button Wrinklewort regeneration. Bollards and rock can be used to physically prevent the encroachment of roadside mowers.</p> <p>The conservation of populations of Button Wrinklewort requires a multi-faceted approach guided by the National Recovery Plan. A critical first step is ensuring areas containing significant populations are protected from threats which should focus on controlling invasive species such as African Lovegrass and Chilean Needlegrass through methods like targeted herbicide application, manual removal, and / or controlled burns.</p> <p>Maintaining the open grassland structure is essential, which can be achieved using ecological burning practices or carefully controlled slashing, while avoiding slashing practices that can harm the plants. Buffer zones should be established around populations to minimize the effects of adjacent land uses, and wildlife corridors can connect isolated populations, promoting genetic diversity and ecological resilience.</p> <p>To expand and reinforce population genetics (and vigour), translocation and propagation techniques can be employed, using seeds or cuttings collected from existing populations under permit.</p>
<i>Other Considerations</i>	<p>Ensure weed sprayers and contractors are experienced in plant identification and can identify potential Button Wrinklewort (including outside flowering periods) to avoid any off-target spraying.</p> <p>Refer to the Bushfire & Works Plan for National Capital Authority Estate – 2020-2022.</p>

5. O'Malley Woodland



Vector, Landscape restoration plans and actions provided by Environmental Restoration Design and Planning (ERDP). Spatial data management provided by cecADAPT.

O'Malley Woodland Grassy Ecosystems Restoration Plan - Overview

-  Weed Control
-  Regeneration
-  Woody Weeds

0 45 90 180 m



Map prepared by Environmental Restoration Design and Planning. While all care is taken to ensure accuracy, it cannot be guaranteed that it is free from errors. Base layers were obtained with permission from the ACT Government spatial database. Date: 20th November 2025

<i>Site</i>	OR1, OR2, OR3
<i>Description</i>	This is a patch of moderate quality grassy woodland which includes the headwaters of Woden Creek and large artificial wetland. Weed loads across the reserve are moderate, with grass species such as African Lovegrass, Chilean Needlegrass and Serrated Tussock all present but in manageable numbers. A large patch of Blue Periwinkle along Hindmarsh Drive is threatening groundcover values. Woody weeds are also present, with incursions of large Sweet Briar and Cootamundra Wattle plants, along with Blackberry encroaching from Hindmarsh Drive. Threat management is the focus of managing this area.
<i>Actions</i> <i>Priority: Medium</i>	<p>Control woody and grassy weed species with cut and dab and target chemical application (spot spray). Follow-up weed control will need to be completed three times per (winter for African Lovegrass, spring for Serrated Tussock and summer for Chilean Needlegrass) to ensure effective control.</p> <p>The Blue Periwinkle is a very high priority and will need a combination of chemical and manual control. Blue Periwinkle should first be sprayed in spring when foliage is vigorous, and the plant is most susceptible. After the effects of the chemical have become obvious (several weeks), the remaining vines will need to be removed manually, ensuring as much of the root system is removed as possible. Regular monitoring will have to be conducted over the following 6 – 12 months and any new sprouts treated with targeted chemical application (spot spraying) or removed manually.</p> <p>Control woody weeds using cut and dab method for smaller sapling. Larger woody weeds may have to be removed over time using a chainsaw, but smaller regenerating plants are the highest priority followed by areas with low numbers of these plants.</p>
<i>Other Considerations</i>	The reserve is near many large embassies and official residences, where the planting of exotic species is commonplace and reflective of home countries. The necessitates the need for continual monitoring around the perimeter of the reserve for new incursions.

6. Summary of Priorities for All Sites Combined

The following table provides an overview of relative priorities across all sites.

The highest priority is the protection of high quality woodland and grassland sites and threatened species areas from transformer weed incursion. Prevention of further spread of weeds is more important than trying to control large patches of weeds or restore degraded sites especially where resources are limited. The exception to this is where new weeds are starting to establish and are in low densities but have the potential to be devastating. A notable example of this is Blue Periwinkle at Gurubang Dhaura (Stirling Park).

The next highest priority is to maintain sites where works have already been undertaken to protect previous investment. This includes planting maintenance, ongoing (follow up) weed control and other works.

Other enhancement works are important to improve condition, but they are a lower priority than those mentioned above. That is, it is a higher priority to prevent degradation than to fix it. Activities may include further grassland restoration, biomass management trials, planting new areas and enhancement works. Exceptions to this are when addressing point-source or sheet erosion impacting on water quality downstream.

Many activities relate to ongoing land management regimes such as biomass management through burning and / or slashing, mowing for access, recreational facilities, heritage management, infrastructure and drainage. These are carried out on an as-needs basis and represent status-quo management for the most part. These tend to be incorporated into annual operations plans and budgeted for.

The table below provides a summary of activities, their relative priority, the sites to which each action applies, and a unit cost for each. The purpose of this is to enable the users to develop site-specific restoration plans for each area in line with available budgets.

Action	Priority	Area
Control priority groundcover / grassy weeds in intact high quality grassland and woodland areas.	Very High	SP3, SP9, SP10, SP18, SP19, SP27, SP29, SP31, SP42 YR14, YR17, OR1, SC1
Control Alligator weed.	Very High	YR7, YR22
Contain and control Blue Periwinkle and Japanese Honeysuckle	Very High / High	SP35, SP36, SP37, SP38, SP44, OR1
Maintain existing scrape and sow sites.	Very High	YR10, YR13
Control woody weeds (invasive native species and exotics).	Very High / High	SP1, SP14, SP37, SP42, OR1, SC1, GS2
Control priority groundcover / grassy weeds in intact high quality grassland and woodland areas.	High	YR15, SP16, SP17, SP20, SP21, SP30, SP32, SP33.
Contain and control St John's Wort (sensitive areas).	High	YR14, YR20
Contain grassy weeds	High / Medium	SP12, SP13, SP28, SP40, SP46 YR1, YR2, YR3, YR18, GS1

Undertake burning for biomass management.	High	YR17, YR20, SC1, GS1
Install conservation marker posts.	High	SC1
Genetic diversification – Button Wrinklewort (isolated populations)	High	SC1
Undertake revegetation - woodland	Medium	SP28, SP, 30, SP32, SP33, SP41
Undertake revegetation – swampy meadow	Medium	SP37, SP39, YR14
Undertake track and / or carpark maintenance	Medium	SP11, SP15, SP22
Undertake slashing for biomass management and weed control.	Medium	YR5, YR11, GS1
Control woody weeds (invasive native species and exotics).	Low / Medium	SP4, SP5, SP6, SP7, SP8, SP24, SP25, SP26, SP39, SP41, SP45, YR6, YR7, YR 8, YR9, YR16, YR18, YR21, GS3
Control mature woody weeds (including non-local natives).	Low	YR8
Reestablish and expand grasslands through scrape and sow or spray and sow method.	Low	YR4, YR12, GS1
Visitor services / interpretations signage	Low	SP34