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2019-2020 ACT ENVIRONMENT GRANTS
PROJECT EVALUATION AND FINANCIAL REPORT

Project Title: Bringing Biodiversity Back to Canberra Suburbs

Grant Recipient: Molonglo Conservation Group

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Project reporting against the Project Plan, outcomes and Approved Budget is a requirement of Item 3 Schedule 1 of the Deed of Grant.

All information in this report is public information, except for all personal and financial information which will remain confidential. If any other information is commercial-in-confidence, please attach as a separate page to this report and mark it accordingly.

In filling out this form please attach any supporting documentation, or additional pages, if more space is required. Please ensure all attachments are clearly marked with the question number they refer to.

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Project Report

1. Please summarise all project activities in relation to the Project Plan, describing how they were carried out. Attached before and after photographic evidence to support your summary for all on-ground works.

Project Activities

Grant Fund Contributions

Activities Summary

Signage corflute signs X 4 – communications activity

Signs were designed and installed at two entrances to the Fowles Park with a summary of the goals of the project, the source of grant funding and a QR code with a link to the ACT Urban Woodland Rescue Facebook page so the community could remain up to date on the projects activities and progress.

Acquiring and planting native tube stock

Fowles St Park was heavily impacted by African Love Grass and Chilean Needle Grass so grant funding for native tube stock from the Box Gum Woodland plant community was the priority. Approximately 88% of grant funds was spent on plants. This allowed for a minimum of 4 stems per sqm with fewer required where assisted regeneration was possible.

Soil preparation – use of excavator

In April of 2020 an excavator was engaged to explore scaling the manual methods used to address ecologically transforming weeds and soil preparation. This yielded positive results in both releasing soil compaction and removing weed seed with minimal disruption. Soil was managed on site which added value and kept costs low.

In Kind Contributions

Activities Summary

Through a core group of 8 volunteers assisted by a wider group of casual volunteers, 1117 hours of labour was given in kind:

- Vegetation surveys using a DAFOR scale and easy assessment of species abundance.
- Surveying community use of the site
- Weeding
- Planting
- Installation of builder's flags around planted areas
- Mulching

- Watering
- Mowing
- Composting and redistributing composted soil
- Communications in person during planting sessions, a presentation on planting natives in gardens and distribution of a flyer to the local community
- Liasing with TCCS
- Monitoring presence of ecologically transforming weeds and uploading observations to EBird and Canberra Nature Map
- Sharing knowledge through presentations to the immediate and broader community.

Communications and Community Engagement

Citizen Science

A presentation was provided to the local community and 25 households have included native species from the Box Gum Woodland plant community in their gardens to improve urban biodiversity and improve condition and connectivity between Fowles St Park, surrounding gardens and Oakey Hill. Interest in adding local natives to gardens is ongoing.

Observations of insects, plant species and bird species were uploaded to Canberra Nature Map field guide and EBird. (See Attachments)

50 species of bird including 47 native and 3 exotic species were observed and 90 complete checklists recorded during the course of the project.

12 species of butterfly including 11 native and 1 exotic. Ore then 10% of the native butterfly species in the region.

Face to Face

Significant engagement happened face to face during planting sessions with members of the community approaching volunteers about the project.

Presentations/Media/Stories

More than 50 interviews/presentations/printed media stories including on ground project activities have taken place.

Social Media

An effective Facebook page presence has been established with a wide and diverse audience, thousands of monthly engagements, and constant email contact from the community.

ACT Urban Woodland Rescue Facebook

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Volunteer Labour Monitoring and Maintenance

Monitoring for the presence of ecologically transforming weeds

The DAFOR scale was applied to estimate the proportion of target weeds to native vegetation in each restoration section. This provided a good informal basis over time for assessing whether there was a trend for increasing or decreasing presence in particular of ALG and CNG.

The first survey of the whole site was provided in kind thanks to Dr Michael Mulvaney.

Survey of Community Use and Pedestrian Boundary for Mature and Hollow Bearing Trees

Observations of pedestrian activity were made in the preliminary stages of the project to inform project design. This included access by asset providers, TCCS mowers and future maintenance

A key object of the project was protection of mature and hollow bearing trees which included planting a pedestrian boundary around as much of the drip line of each tree as possible to prevent tree removal, allow for fallen timber and restoration of the original plant community under canopy all key factors in tree and ecosystem health.

Observations of pedestrian activity near trees with pedestrian boundary plantings were made at different times of day on different days including weekends to give insight as to the effectiveness of the plantings in dissuading pedestrian activity.

Stakes and Flags

Timber stakes and builder's flags used to alert the community to the restoration areas purchased from bunnings. Originally listed as a grant fund contribution became an in-kind contribution from residents.

Composting and reuse of soil from weed removal

Weeds and soil were composted instead of being removed from the site. Soil and vegetation removal is costly and was unnecessary on this site. Weeds and soil were deposited in piles in direct sun. Carbon supplementation and water was added to facilitate composting process and modify the soil nutrient profile.

Mowing Maintenance

Fuel and labour for mowing provided in kind from core members of the team. Mown areas now require less then 40 minutes mowing with a residential mower.

Weed Maintenance

Labour to manage various weed species while natives establish provided in kind by volunteers.

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Volunteer Labour – revegetation and assisted regeneration

Weed Management

A weed strategy was developed prioritising ecologically transforming weeds and applying best available knowledge on the limitations of each species.

For ecologically transforming weeds both weed and surrounding soil is removed and composted. The depression is filled with sugar and mulch and allowed to act as a pore slowing water in the landscape.

A weed's biological profile and the characteristics of the soil where it is found determines how it can be managed including which native species could most effectively replace it.

Volunteers were assisted with plant ID. Weed identification involved a focus on removal of a species until a volunteer learned to recognise it at different stages of its life cycle. A target weed was removed and used as a reference.

Stakes and Flags

Timber stakes and builder's flags used to alert the community to the restoration areas purchased from bunnings. Originally listed as a grant fund contribution became an in-kind contribution from residents.

Soil Nutrients

White Sugar

Sugar listed as a grant fund contribution became an in-kind contribution donated by residents. It was used as short-term carbon supplementation to alter the soil nutrient profile when planting at approximately ½ a kilo per sqm.

Coarse Mulch

Coarse mulch was used as medium-term carbon supplementation when planting, to provide insect habitat and slow water. In kind contribution from TCCS and various arborists.

Water

In kind contribution of approximately 3 water truck-loads of water from TCCS and $500 of additional watering in kind provided by residents over the length of the project.

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Soil Testing

Testing took place on 29/01/22. Soil was tested in two parts of the park in the middle and three quarters of the way to the top of the park.

In terms of acidity Ph ranged from 5 – 7 moderately acidic to neutral considered good conditions for plant growth. A general description of colour indicated brown, grey-brown and yellow-brown. In terms of texture soil tested was clay loam with a higher gravel content when sampled close to the top of the way to the top of the park.

Soil testing kits were provided as an in-kind contribution thanks to Celine Anderson.

Soil texture

Soil Ph

Left: soil sampled from the centre of park.

Left: soil sampled from centre and near the top of the park.

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Top-Soil and Seeding of native grasses

1 kg of Native grass seed was provided as an in kind, contribution for this experiment.

Seeding of native grass seed was done in two plots of approximately 2m X 2m without top-soil, added to see if traditional preparation on native soil where only a few cm was raked from the top. Native seed was applied liberally with a light sprinkling of sand would allow native grasses to germinate.

We found the native grass seed including Austrostipa Bigeniculata and various wallaby sp germinated readily enough however ALG also germinated freely and was recorded frequently.

Methods used for exotic grass seed including the removal of the top 5cm of soil was insufficient to allow native grasses to dominate the ALG seed bank. Given the persistent nature of the ALG seed bank funds for top soil were spent on forest tubes.





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Planting native tube stock

Labour for planting of tube stock provided by volunteers.

The planting process for forest tubes required a hole half a basketball deep and a basket ball wide. Each plant received 5 litres of water on planting. Sugar was applied at ½ kilo per sqm. Coarse mulch applied generally no deeper then 10cm. Each plant received 5 litres of water.

Plant species and location was determined based on the current condition and use by wildlife in the area being restored including prospects for assisted regeneration, ecological function, structure and composition of the Box Gum Woodland plant community, broader location in the landscape, access for asset providers, community use and future maintenance.

Losses experienced during the la Nina events were replaced with species appropriate for the wetter conditions. This enabled establishment of a broader more resilient seedbank.

Restoration of top area of Fowles St Park with ACT Roads

ACT Roads initiated a project to upgrade storm water sumps on Buvelot St. This involved disrupting the top of Fowles St Park and follow up remediation of 100m2 with exotic dryland grass.

Water had been redirected from Buvelot St into the project as part of the restoration process through temporary swales. It was agreed that a spreader would be installed alongside the footpath to redirect rainwater permanently into Fowles St Park and remediation would be consistent with the ecological restoration.

The cost of materials including native plants, machinery, water and labour to prepare the site was an in-kind contribution from ACT Roads with cooperation from participating Engineering firms Cord Civil Engineering and Indesco Engineering Consultants. Volunteers provided in kind labour to plant and maintain until establishment.

Native species chosen and density of plantings to receive water from the spreader were chosen to manage nutrients. A larger area below the spreader was then carved into a small pool.

- **Photographic evidence see Power Point document sent by WeTransfer.**
  - Download link
    https://we.tl/t-fo4tiFKQIJ

2. Actual Start Date: 15/08/19

   Actual Completion Date: 31/12/22

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3. Has this project achieved the activities and milestones by the key dates stipulated in the Project Plan?

❑**X** No If no, in what ways did it vary and why, indicating if a project variation was approved by the Grants Administrator?

Extension of time granted to 31/12/22.

Approved minor variations to budget:

Use of funds from propagation activities which were not possible during Covid to an excavator to scale manual methods.

Redirection of funds toward more plants where materials were provided as in-kind contributions:

- native grass seed, soil testing kit, water, stakes, flags, sugar and vegetation surveys.

Redirection of funds from top-soil, to plants where sowing of native grass seed using traditional methods failed to address the presence of ecologically transforming weeds.

Redirection of funds from weed spray back packs and organic herbicide to plants due to La Nina weather conditions.

Extension of time for final reporting requested for 15/06/23. Please see acquittal form and report for further details regarding circumstances for the delay.

Project Evaluation

4. Outline the main achievements in relation to the objectives for the project.

Environmental Outcomes

Goals and Achievements

Management of Ecologically transforming weeds

Managing ecologically transforming weeds African love Grass and Chilean Needle Grass is recognised as a significant threat to the ACT's biodiversity. The Fowles St Park was heavily impacted by these weeds.

The resurgence of ecologically transforming weeds African love Grass and Chilean Needle Grass has declined by approximately 90% across all areas subject to restoration activities equivalent to approximately 5500 sqm.

Protection of mature and hollow bearing trees

The loss of mature and hollow bearing trees is a key threatening process in the ACT. As keystone species in the landscape the second goal of the project was to implement strategies to protect them from removal.

The pedestrian barrier of Lomandra longifolia planted around most of the drip line of the trees has succeeded in removing pedestrian activity under tree canopies allowing for the return and re-establishment of the original biodiversity including flowering species under their canopies. This is improving tree health, allowing for the deposition and retention of fallen timber which is instrumental to ecosystem function, facilitating natural hollow formation essential to the protection of hollow bearing native animal species, educating the community on their value and securing the community's support for their value and importance to biodiversity in the urban landscape.

Enhancing urban biodiversity

Restoration of understorey and mid storey Box Gum Woodland species

The Box Gum Woodland plant community was characterised by a rich biodiverse understorey and the presence of some mid storey shrubs and regenerating saplings.

Blakely's Red Gum sapling regeneration has resulted in >90 saplings which are now providing functions for insect life and important structure for the ecological function of the park.

More than 75 understorey and mid storey species from the Box Gum Woodland plant community have been planted including key early colonising Acacia's and understorey perennial grasses.

Successful assisted regeneration of a number of native grasses and forbs can also be seen across several plots.

Plant loss has been recorded at <10%.

Scaling Soil Preparation and Planting

The use of an excavator to scrape and de compact soil in preparation for planting was both successful in terms of management of ALG and CNG and cost effective.

Slowing Water

- The use of mulch berms and vegetation has slowed water through the park this appears to be increasing moisture retention and reversing erosion. (Attachment 4.8 satellite pics?)

Ephemeral Rain Garden

- In a joint project with ACT Roads, Cord Civil and Indesco, water run-off from Buvelot Street has been permanently redirected into a rain garden created by the volunteers.
- When full during rain events the water spills over and travels downhill. The use of a Go Pro during rain events appeared to show water joining what may have once been an ephemeral stream.
- Local species found at certain densities to manage nitrogen and filter pollutants have been used at the mouth of the spreader which redirects water into the rain garden.

Change in vegetation management

- walkable areas feel softer under foot and retain moisture for longer because they are exposed to better targeted vegetation management. Mown areas are mown less frequently, at a higher setting.
- mowable areas are designed to be managed with a lighter smaller commercial mower to reduce soil compaction and erosion. For the moment the volunteers mow with residential mowers and the intensity and frequency of mowing resulting in an absence of erosion in these areas.
- restored areas can be slashed with a whipper snipper or hedging tool, spot poisoning has not been used but could be used and patch burning would be ideal and readily adapted.
- Ready access for Icon Water is from Withers Place and Fowles St with assets identified and kept clear. Access for playground mulch is from Withers Place. Access to easement from Fowles St or Withers Place. Access for Evo Energy from Withers Place. Access for contractors pruning trees for Evo Energy from Buvelot St and Withers Place.

Improvement in Connectivity and Condition of the Fowles St Park

Returning native vegetation to the park and surrounding gardens

- the condition of the understorey in the park has improved with an increase in structural complexity from the addition of native biodiversity through planting and assisted regeneration.
- Approximately 103 native species from the BGW now in the park include numerous grasses including Themeda and Poa Sieberiana. A wide range of herbs and forbs including Rutidosis leptorhynchoides, Ranunculus lappaceus , Glycine Clandestina and Cymbonotus lawsonianus. Sedges including Carex appressa and Juncus sp. A variety of important Acacias

including Acacia dealbata, Acacia implexa, Acacia melanoxolon and Acacia paradoxa. Establishment of Indigofera adesmiifolia with seedlings establishing from parent plants.

- condition is improving at mid structure level with mid storey shrubs now establishing
- 11 species of native butterfly have been recorded returning to the park representing 10% of the species in our region.
- 47 species of native bird and 3 exotic bird species have been recorded visiting the park and surrounding gardens. Higher order predators have been observed hunting insects and small reptiles in the park including the southern Boo Book. Tawny Frog Mouth, Kookaburra.
- Increase in the number and species of insects have been recorded
- small groups of shrubs are providing stepping stones for small bird species travelling through and using the park
- increase in the planting of local species in surrounding gardens has increased with 25 residents living around the Fowles st Park engaged in planting local natives. This is likely to contribute to an improvement in connectivity and local habitat particularly for small woodland bird species including wrens, scrub wrens, yellow thornbills.

Knowledge/Skills Outcomes

On Ground Volunteering

- A core group of 8 people drove the on-ground restoration process with episodic participation in a variety of activities including identifying insects and birds from 37 occasional volunteers.
- Volunteers successfully acquired the ability to identify the key ecologically transforming weeds at various stages of development and some ancillary weed species which facilitated the protection of and assisted regeneration process.
- volunteers succeeded in applying correct process for preparing soil for planting, mulching and watering.
- volunteers learned to ID local birds and to record calls, to photograph insects with sufficient detail to allow for identification, to work sensitively to avoid disruption to insects and tree roots.
- Volunteers were directed to EBird and Canberra Nature Map including the project accounts for this project.
- Every session provided an opportunity to engage in discussion on the local ecology and the interdependence between native plants, animals and insects, the importance of fallen timber, returning carbon to the soil and the role of our local eucalypts as keystones species in the landscape.
- A quick survey of weed species was done at the beginning of each session using the DAFOR scale to estimate the proportion of Chilean Needle Grass and African Love Grass.

Schools

- CIT - incorporation into assessment in Biology for Year 11 students. . Presentations and on ground engagement with students from CIT proved successful. The project was incorporated into student assessment with feedback from teachers that connecting with the Fowles St project inspired students and this was demonstrated in the quality of assessment received.
- Merici College - Biodiversity project in progress. ACT Urban Woodland Rescue wrote the submission for the Merici Biodiversity project which was subsequently the successful recipient of awards. So far feedback indicates students are more likely to participate when learning on ground through the BGW plant community project.
- Telopea Park Year 7 - presentation provided as part of science stream.

Connecting people to nature through innovative approaches

Adding native biodiversity to gardens

- 25 local residents agreed to add local natives to their gardens. Emphasis was on providing for movement of wildlife by allowing plants to reach the height of at least a fence when planted along a fence line, pruning for an informal shape to allow for habitat particularly for some small woodland bird species. Planting of native grasses and forbs for food and planting local wattles and other sub shrubs to move away from the mass planting of native cultivars and exotic fruiting species.

Citizen Science Activities

- 90 checklists on E bird recorded the presence of over 47 native bird species and 3 exotic bird species visiting the park. Initially checklists were done weekly and from May 2021 bird observations are being done every 6 months.
- >150 sightings have been added to a field guide established on Canberra Nature Map to record insect sightings and plant species which spontaneously regenerated in the park during the course of the project.
- Species which have been re -introduced will now be added to Canberra Nature Map.
- 11 species of native butterfly have returned which is >10% of the species in our region.

Use of Citizen Science results and observations as engaging narrative stories

- The results from citizen science activities were harnessed to create short narrative stories to share with the community. They proved to be particularly innovative and effective tools for engaging a wide range of audiences because they brought the park project to life allowing audiences to experience through small events the significance of ecological function and ecological relationships making them real and accessible by situating them in time and place.

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Social Outcomes

How the community engages with the park

Park visitors

- the project has been successful in its design by facilitating pedestrian movement through the park allowing people to experience different parts of the restoration including parts of the park which were not previously approached by most visitors.
- Parents and children come from out of area to picnic and spend time in the park.
- Community members report their engagement with biodiversity in the restored areas and children's activity around the park has changed from a focus exclusively on the playground to running around the restored areas playing games they create themselves.
- As a result, the park is listed as a favourite playground destination in Weston Creek and is included on Walk Canberra and Playgrounds of Canberra where it is rated 5 stars.

Community engages online - ACT Urban Woodland Rescue Facebook Page

- The community also connects with the park project and issues raised by the project on the project ACT Urban Woodland Rescue Facebook page which attracts thousands of engagements every month.
- Importantly followers of ACT Urban Woodland Rescue are strangers to the project and support has grown organically rather than in response to any marketing strategy.

Community Feedback

- community feedback has been overwhelmingly positive and is growing over time.
- During sessions in the park people walking through are constantly seeking to engage volunteers to share their support for the project.
- The community reach out via the Facebook page and email to share their support.
- The core volunteer group share a close and committed bond to the project and ensuring its success.
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Presentations and Media

- Presentations have been given online and in person across different sectors of the community including community groups, community councils, National Landcare Conference and Dept of Agriculture.

5. Did the project achieve the desired outcomes? ❑**X** Yes

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6. Were there any difficulties or impediments encountered and, if so, how did they influence the outcomes?

See table below

Difficulties/Impediments	Influence on outcomes	Remedies/Improved outcomes
A Spring baseline vegetation survey could not be conducted in 2019 because the park was mowed by mistake by TCCS.	This was unfortunate but earlier that year Dr Michael Mulvaney walked through the park and used the DAFOR method to provide a vegetation survey. No obvious impacts on quality, cost or time.	Use of vegetation survey with Dr Michael Mulvaney. Funds redirected into additional plants.
Use of quadrats for measuring progress **October 2019**	Stakes and coloured tape was used to establish quadrats in several plots however the stakes became an item of curiosity and we found they would move and sometimes disappear early on in the project so this approach was abandoned and another method used to track changes in vegetation. No impact on quality of outcome, cost or time.	Use of regular DAFOR surveys at each session as a quick guide on the presence of the key ecologically transforming weeds ALG and CNG. This was very useful and an educational tool.
Shortage of plants 2019-20	A particular species were required it took longer to complete due to availability and seasonality issues regarding supply extending time frames no impact on outcome quality or cost.	Extension of time. Ordered plants for earliest possible planting. Some benefit in allowing further observation of changes in existing vegetation.

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Smoke during fires Summer 2019-2020	Restrictions on activities delayed the ability to plant extending time frames on impact on outcome quality or cost.	Followed ACT Government advice and engaged in forward planning to catch up on time. More time approved to complete.
Loss of follow up in kind vegetation survey from Molonglo Conservation Group	A change of staff meant the availability of in kind assistance for a follow up vegetation survey was not possible. No impact on cost. Survey will not be within time for the project report. No impact on quality of outcome is anticipated.	In kind contribution from a local ecologist will allow a follow up vegetation survey in Spring 2023. As ecological restorations take time a later follow up vegetation survey is likely to benefit understandings of progress in this project.
Covid **March 2020 – Early 2022**	Prevented volunteer activities for the lockdown periods - stipulated by TCCS which delayed project milestones for planting and propagation activities. Plant supply issues and engaging the community in planting in their gardens was compromised. Particularly disruptive to people's routines and volunteers getting sick this seemed to take a long time to settle down. This impacted volunteering and community participation extending time frames, some impact on quality of outcome regarding participation no impact on cost.	Volunteers from same household maintained the project until restrictions could be lifted. Permission sought from NRM to extend time frames and redirect funds from propagation materials to scale methods with an excavator. This was cost effective and successful in terms of weed management, soil compaction, assisted regeneration and planting time. Permission granted to extend time frames. The number of households participating in planting natives was cut by half to allow this part of the project to go ahead.

		Ongoing engagement on the Facebook page and presentations online assisted in keeping people engaged with the project until restrictions were lifted.
Storm water sump upgrade impacting the top of Fowles St project. **2021**	A storm water sump upgrade was initiated at the top of Fowles St Park without consultation with the project. Key concerns included damage to existing plants, lost opportunity to retain water from rain events in the park and damage from the use of dryland exotic grass which was to be seeded at the top of the park.	Established contact with lead engineer with project contractor Cord Civil. Consulted NRM. Onsite meeting organised with ACT Roads. Negotiated outcome with ACT Roads and Cord Civil was reached to fund a new restoration area 100m2 with native grasses and forbs, a spreader off the top of the footpath to direct water from Buvelot into Fowles St Park, use of excavator and carbon supplementation to prepare the soil. The first part of an ephemeral stream to process the water arriving from the spreader was constructed by volunteers.
La Nina 21-22 and use of Organic Herbicide	The original intention was to experiment with an organic herbicide. It was clear the constantly wet conditions would limit its use and effectiveness, so this was abandoned. No impact on outcome quality, cost or time.	Remaining funds spent on plants.

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La Nina 2022 and change of plant species.	The series of La Nina events led over time to a decline in some plant species located in a number of areas in the park where the on-ground conditions remained very wet. This did lead to losses of established species. Poa Pratensis emerged as a serious weed which had to be tackled in these areas. No impact on outcome, quality or cost to the budget but increase in in kind contribution and time.	Funds remaining from top soil, organic herbicide, back packs and soil testing kits were directed to purchase plant species suited to the wetter conditions. The benefits include increasing seed bank from these additional species for future wet events to prevent future invasions of wet species weed like poa pratensis.

7. Outline any action taken to remedy difficulties or impediments encountered and/or improve the project outcomes.

See Table above

8. What have you or your organisation learnt from this project?

What have we learnt from the project/recommendations

Connecting Community and Box Gum Woodland

1. We found the key challenges to a successful ecological restoration in an urban park when engaging with the community were:
   - most people we connected with were not aware of the importance of local ecosystems and unfamiliar with the Box Gum Woodland plant community.
   - misinformation about risks associated with local ecosystems including eucalypts and limb or tree failure and fire and snakes were common and had their origins in media reporting particularly on natural events like storms, risk-based advertising by arborists and the opinions of government officials.

- a recurring association between heavily mown landscapes and removal of fallen timber with the perception that an area well cared for or properly managed.
- Current land management practices

2. We found the most successful strategies for connecting the community with the Box Gum Woodland project at Fowles St were:
   - to share evidence-based information about the BGW plant community and the value of restoring ecological function to local parks and gardens in a number of ways including face to face, Facebook stories, online and face to face presentations, events, on ground opportunities for volunteering, on ground tours
   - Be available to answer questions via email, Facebook and face to face during on ground sessions and during presentations.
   - Share small narrative stories about the projects progress
   - Give people time to take new ideas on board and freely ask questions and share concerns.
   - Direct experience of the park.
   - Planning the restoration to be compatible and enhance community use

3. The design of the pedestrian barrier of local sedges and grasses around the drip line of trees designed to allow for fallen timber, allow for understorey species, provide a mowing edge for maintenance and act as a visual cue the space was being managed was supported by many in the community because:
   - planting around the dripline in a mass planting of Lomandra Longifolia provides a recognisable distinction between mown and unmown areas although the length of time to establish meant builders flags were required to protect them while growing.
   - Frequent feedback suggests the barrier planting and understorey planting makes the trees seem more valuable. They look like they belong together.
   - Mown and unmown areas allow for a visual appreciation of the restored areas
   - Flowering species and interesting native grasses made fallen timber more appealing

4. We found that presentations to high schools and biology students from CIT about the restoration of a local plant community at Fowles St Park was more engaging and positive for students learning experience than the use of examples from foreign plant communities.

Recommendation 1: Educate the community on how local plant communities function and the unique benefits they have evolved to provide including the role of mature and hollow bearing trees and keystone species in this landscape, the role of fire and how it is managed and the importance of local fauna like snakes.

Recommendation 2: Ensure the local ecology is incorporated into the school curriculum.

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Restoration of Box Gum Woodland in Modified Urban Spaces

1. We found the key challenges to a successful ecological restoration at Fowles St Park were:
   - The drought conditions delayed plant establishment and required more water to survive.
   - Soil compaction contributed to hydrophobic soils requiring very slow watering extending time required by volunteers.
   - Manual digging and weed removal was challenging in conditions where soil was heavily compacted.
   - La Nina changing conditions on the ground increasing weed in some areas and changing weed species in other areas.
   - Time taken in the beginning of the project for plant establishment and curiosity from the community initially led to an increase in pedestrian activity in restored areas.
   - Inexperience in plant ID among volunteers
   - Monitoring bird species
   - Large number of weed species
   - The wider than expected distribution of African Love Grass and Chilean Needle Grass

2. Most successful approach to ALG and CNG weed management:
   - Development of a basic weed strategy
   - Prioritising of the documentation and removal of ecologically transforming weeds in stages.
   - Documentation and research on other weeds to determine process of removal
   - Use of an excavator to remove weed seed bank and release compaction in the soil.
   - Use of mulch and sugar
   - Composting
   - Succession planting of weeds that perform beneficial functions
   - Minimising disruption by mowing higher and less frequently

3. Most successful approach to planting
   - Mapping the movement of water
   - Slowing water with and creating insect habitat with mulch berms
   - Assisted regeneration
   - Choosing species according to soil and weather conditions, ecological function and landscape location.
   - Monitoring of bird and insect activity
   - Planting sand species choice tailored to the conditions of the site

4. Most successful approach to bird monitoring
    - Recording bird calls and double checking the species calls online before confirming on Ebird.

Reccomendation 3: protect mature and hollow bearing trees with a pedestrian barrier and restoration of understorey BGW species to allow for fallen timber and hollow formation.

Reccomendation 4: Engage ecologists to assess restoration process for new projects including species choice and location.

Reccomendation 5: Provide training for operations staff in TCCS so landscape management moves away from an industrial approach with a focus on high disruption to a sustainable ecologically sensitive approach of lower disruption practices including mowing higher.

Landscape Management

1. Key challenges to landscape management
    - Wind dispersed weed species
    - New weeds in wet weather conditions
    - Biomatter management
    - Replacing invasive weed species

2. Most successful approach to managing wind dispersed weeds
    - Minimising disruption
    - Identifying key species and their characteristics to manage their removal

3. Most successful approach to managing new Weeds
    - Identifying new weed species and their key characteristics
    - Establishing appropriate native species to take the opportunity to create a competing seed bank

4. Most successful approach to biomatter management
    - Mowable areas are more effectively managed by mowing high and less frequently.
    - Scaling biomatter management with a brush cutter is quick and effective when done in patches to avoid disrupting insect life cycles.
    -
5. Replacing invasive weed species
    - Invasive weed species including Cotoneaster and African Firethorn provide important structure and resources in the landscape. The most successful way to remove them is succession plant with fast growing early colonising species to

Reccomendation 6: Restore sections of urban spaces to protect mature and hollow bearing trees to reduce the mowable area and allow for better management.

Reccomendation 7: Develop an operations process for successively replacing invasive species with appropriate native species by considering ecological function as well as maintenance.

9. Do you or your organisation have any plans to continue, monitor or further develop this project beyond the funded period?

Plans for ACT Urban Woodland Rescue beyond the funded period

1. To continue monitoring of native plant, bird and insect life through EBird and Canberra Nature Map with particular attention to:
    a. Monitoring bats
    b. Monitoring water quality coming from Buvelot Street into the ephemeral stream
    c. Monitoring moths and butterflies.
2. A vegetation survey is scheduled for Spring 2023
3. Continued DAFOR surveying for ALG and CNG.
4. Soil testing is planned for January 2024.
5. To share what we find with others interested in ecological restoration
6. To continue participating and learning through other projects with groups who want to engage in ecological restoration
7. To scope future restoration projects to protect mature and hollow bearing trees , improve and protect biodiversity in Canberra's suburbs and facilitate landscape connectivity.

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Products of the Funded Activity

10. Has the project produced any documents, brochures, books, articles, newsletters, other artistic works or literary works or advertising?

X❑ Yes If yes, please provide a list of material and include the items with this report, attached if possible.

No of events	Communications Activity	Organisation	Location
5	Presentations/events	Merici College	Merici College Braddon
1	Presentation	Woden Valley Community Council	Online
1	Presentation	Weston Creek Community Council	Raiders Club Weston
1	Presentation	Weston Creek Rotary	Irish Club Weston
1	Presentation	Lake Burley Griffin Rotary	Commonwealth Club https://www.rccbg.org/bulletin/View/bb025d76-2693-4ace-85d3-06e3be9e796d
1	Presentation	AAEE	Online
1	Presentation	Inner South Community Council/Molonglo Conservation Group	Online
2	Presentation	Telopea Park Highschool Year 7	Online

2	Presentation	CIT Yr 11 and 12 Biology	Online and Fowles St Park
1	Presentation	See Change	Fowles St Park
4	Interview	ABC Radio	https://www.facebook.com/acturbanwoodlandrescue/videos/935008373759033
3	Interview	2CC	https://www.facebook.com/acturbanwoodlandrescue/videos/1543449306007105 https://www.facebook.com/acturbanwoodlandrescue/videos/296529
1	Press Release	ACT Urban Woodland Rescue	Emailed to media outlets
1	Presentation	Speaker: Environmental Biosecurity Webinar Series 2022 Webinar 5 Australian Department of Agriculture, Fisheries and Forestry	https://publish.viostream.com/play/bgoo5gydw1ywtn
3	Stakeholders Reports	ACT Urban Woodland Rescue	Emailed to stakeholders
1	Print Media Interview	Riot Act	https://the-riotact.com/westons-fowles-street-park-rejuvenated-thanks-to-tireless-community-volunteers/504799
1	Print Media Interview	CBR City News	https://citynews.com.au/2021/meadow-grows-with-a-little-love-from-neighbours/
1	Print Media Interview	"A Word or Two occasional words, reviews,photos,opinion pieces and essays"	https://the-southern-cross.com/owls-old-trees-and-the-act-government/#more-16914
1	Evening News	ABC TV News	https://www.facebook.com/acturbanwoodlandrescue/videos/1101232790617421

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1	Print Media	CBR City News	https://citynews.com.au/2022/nature-offers-a-messy-way-to-help-biodiversity/
1	Radio Interview	2XX	Griffin Building Civic
4	Presentations	Landcare groups established and forming	online
1	Presentation	Nth Lawson Landcare Event	In person Nth Lawson
1	Interview Print Media	Our CBR	https://www.act.gov.au/our-canberra/latest-news/2022/july/grants-support-environmental-stewardship
1	ACT Government Publication - Loss of Mature Native Trees Action Plan	ACT Urban Woodland Rescue : Fowles St Park Case Study: Alice Hathorn	https://hdp-au-prod-app-act-yoursay-files.s3.ap-southeast-2.amazonaws.com/2216/4809/4291/Att_A_-_Loss_of_Mature_Native_Trees_Draft_Action_Plan.pdf
2	Presentation	Fowles St Community /Xmas Party	Fowles St Park/ Alice Hathorn and Mandy Ford
1	Presentation	National Landcare Conference 2022	https://www.facebook.com/acturbanwoodlandrescue/videos/482042456797440
1	Newsletter story	News Friends of Grasslands May&June 2022, p11	"Our final stop was at Fowles Place, Weston, where the previous wall-to-wall infestation of African Lovegrass has been converted to a thriving, diverse carpet of grasses and forbs in two and a half short years - this is truly an amazing site." https://www.fog.org.au/newsletter.htm
1	Print story	Step Newsletter March 2021	"Weston Park"

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1	Print story	News Friends of Grasslands Sept & Oct 2022, p6 & 7	"Fowles St Park Project" Alice Hathorn https://www.fog.org.au/newsletter.htm
1	Presentation	Speaker: Environmental Biosecurity Webinar Series 2022 Webinar 5 Australian Department of Agriculture, Fisheries and Forestry	https://publish.viostream.com/play/bgoo5gydw1ywtn
1	Presentation	Friends of Grasslands	Fowles St Park Guided Tour / Michael Mulvaney/Alice Hathorn
1	Presentation and planting session	St Marks Theological College and ANU Global Health Society ANU Medical School	Not recorded

11. Has any statistics been collected in the course of the project? ❑**X** Yes
    If yes, please attach material to this report.

Please see attached:

1. **Baseline vegetation survey**
2. **E Bird results**
3. **Canberra Nature Map results**
4. **List of native butterfly species**
5. **Volunteer hours spreadsheet**
6. **Invoice spreadsheet**
7. **Acquittal form**

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Financial Report

1. In accordance with Item 3 of Schedule 1 you are required to complete a financial statement and certify Grant expenditure. Please complete the financial statement of all actual expenditure for the Funding Activity, including government, non-government and private, as well as any in-kind contributions. Documentary evidence substantiating this financial statement must be attached to the report.

2019-2020 ACT Environment Grant Schedule 2						
Bringing Biodiversity Back to Canberra Suburbs - ENV1920-BBBC						
Expenditure Items	**ACT Environment Grant**	**Actual ACTEG**	**Recipients contrib**	**Actual Recipients Contrib**	**Other Contrib**	**Total**
	(GST Inclusive)		(GST Exclusive)		(GST exclusive)	
Nursery and Landscaping Supplies:						
Backpack sprayers X 2 X $159	$318	$0.00				
Organic herbicide	$220	$0.00				
Communications – signage corflute signs X 4	$130	114.26				
Water	$500		$0.00	$500		
Stakes approx 50 x $2.83 each	$141		$0.00	$141		
Flags/tree guards	$75		$0,00	$75		
Top Soil - $65 cubic metre x 3	$195	$0.00				
Soil testing kits – x 3 at $70 each	$210	$0.00	$0.00	$70		
Carbon supplementation (refined sugar) – 0.5 kg/m2 x @ $1.70/kg	$850	$100	$0.00	$750		
Native Tube Stock $2.30 - $2.50 each	$7,776	$10,950.74				
Native Grass Seeds approx $360 per kilo	$360	$0.00	$360	$360		

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Ecological Baseline Vegetation Survey. 4 hours at $75ph. With in-kind follow-up in subsequent years.	$300	$0.00	$300	$300		
First Aid Certificate			$99	$99		
TCCS – mulch, water, first aid kit					$1500	
Volunteer labour – revegetation 178 hours. $33.71ph			$6000	$34384.20		
Volunteer labour – monitoring 30 hours. $33.71ph			$1000	$1011.30		
Volunteer hours social media/presentations etc $33.71ph					$5056.50	
Excavator – soil preparation	$0.00	$735				
Administration	$1200	$600	$600			
Total	$12500	$12500	$18218	$39985.50	$6556.50	

Please attach documentary evidence substantiating this financial statement.

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2. Indicate the total Grant received for this project. $12,500.00

3. Indicate the amount of unexpended Grant (if any). $_____

If the Grant was not expended in accordance with the Deed please provide an explanation.

Certification of Financial Statement and Acquittal

15. Certification by the signatory to the Deed of Grant for the Funded Activity.

I/We Karen Williams (name) of Molonglo Conservation Group (organisation)

certify that all information in this report is complete and correct in accordance with the Deed of Grant for this project.

I am aware that:

1. Action may be taken to recover any Grant payment made where the funds received are not used entirely for the purpose(s) for which it was approved.
2. Any unspent funds from the Grant payment must be returned to the ACT Environment Grants unless alternate arrangements have been made with the Grant Administrator.

Signed……. Signed…….

Name……. Name…….

Karen Williams

Chief Executive Officer: President & Managing Director

Date / / Date 15/ 6/2023

Please email PDF version or mail this completed Project Evaluation and Financial Report to the address below, ensuring that all attachments are included.

ACT Government
Environment, Planning and Sustainable Development

Program Administrator
ACT Environment Grants
Natural Resources Management
Department of the Environment & Sustainability Development Directorate
GPO Box 158
CANBERRA ACT 2601