



PARTNERS
Arts, Heritage and Environment
Greening Australia

ACT LAND KEEPERS

SUMMARY OF PROJECT ACHIEVEMENTS

The following has been extracted from each Final Project Report for the period January 2005 – June 2008

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EXECUTIVE SUMMARY

Vision:

Working Together for healthy landscapes

Mission:

Engaging and empowering rural and urban people to work together ensuring on ground action by employing the best science to effect results at a landscape scale.

ACT Land Keepers targets the conservation of rural and non-urban land in the ACT. ACT Land Keepers is delivered through an expanded partnership with ACT and Australian Governments and Greening Australia that:

- replaces the previous ‘Rural Conservation Fund’ project,
- builds on a new focus for Nature Conservation,
- offers the flexibility to incorporate new initiatives,
- increases understanding of the range of community environmental programs, and
- achieving significant efficiencies in program delivery.

ACT Land Keepers is delivered through six projects:

1. *Biodiversity Incentives* - working with landholders to achieve on-ground conservation work on rural and non-urban land;
2. *Greening Industry* working with agricultural and horticultural enterprises to improve environmental outcomes on local grape, olive, lavender and other horticultural farms;
3. *Seeds for Survival*- developing a community seedbank to help address the native seed supply needs of the ACT and region through coordination, education and training in seed collection;
4. *VegLink* - involves community volunteers in on-ground native vegetation management including seed collection, seedling propagation and establishment;
5. *Indigenous Community Nursery Network (ICNN)* - responds to the demand for provenance plants from NRM land managers and to adheres to the revegetation guidelines by propagation, growing and distributing plants with known provenance;
6. *ACT River Rescue* - implements riparian habitat recovery along priority streams in the ACT to address biodiversity and water quality issues. Works include fencing, erosion control, weed management and revegetation. Achievements of *ACT River Rescue* are included in the *Biodiversity Incentives* section of this report.

Through co-investment from the Australian and the Australian Capital Territory (ACT) Governments for a total of **\$3,998,177**, and cash contribution from Greening Australia for a total of **\$665,626**, and in-kind contributions from volunteers at **\$794,970**, and in-kind contributions from land managers **\$1,531,282**, the project achieved the following highlights:

- Establishment of a community Seed Bank collecting and distributing 283 kg of local seed,
- 3,950 active volunteers engaged in conservation activities = 9,521 volunteer people days = 26,499 volunteer hours,
- 350 community events, 42 major planting events and 48 seed propagation events,
- 56 rural land managers and ACT Government involved in protecting, enhancing, reestablishing native vegetation and controlling weeds on 1,715ha across 181 sites.
- 68,004 plants planted by volunteers,
- 36 community groups engaged in conservation works,
- Establishment of Seed Production Areas and 4 community provenance nurseries, and
- 128 ha of native vegetation identified for collecting local provenance seed.

BIODIVERSITY INCENTIVES ON RURAL AND NON URBAN LAND

PROJECT OUTCOMES

- Employment of 1 full time equivalent (FTE) project management position to coordinate the project. The position undertook site visits with landowners, provided advice on on-ground works, distributed written information (for example weeds fact sheets, native species guides and erosion mitigation fact sheets), prepared site management agreements with landowners, coordinated volunteers (Green Team) to assist landowners complete the revegetation component of on-ground works, assisted with species selection, provided ongoing support to the landowners, organised field days and events, promoted and supported the project.
- The project engaged more than one third of all ACT rural landowners/managers in on-ground works, during a time when landowners were suffering the effects of extended drought and in many cases were still recovering from the effects of the 2003 bushfires.
- Woody weeds / WONS control was carried out across an area of 782 ha of land.
- 54 site management plans were developed with 44 landowners.
- A total of 31,456 native tubestock planted.
- 16 monitoring sites were established across a selection of sites.
- 57 kilometres of direct seeding was undertaken during the course of the project.
- 26 kilometres of fencing erected for shelter belts, gully/creek protection, and remnant protection.
- 15 off stream watering points established.
- 715 community volunteers engaged in planting, seed collecting, and propagation activities.
- Biodiversity Incentives assisted with the refining and production of the ACT Monitoring Manual.
- A Carbon and Biodiversity Scorecard is being developed from the research outcomes of the three honours students previously mentioned.
- The project contributed to 8 field days, with a total attendance of 193 people.
- 53ha of native vegetation has been protected.
- 91ha of native vegetation has been enhanced or protected.
- 112 ha of native vegetation established.

MAIN ACHIEVEMENTS

IMPROVING AND REESTABLISHING NATIVE VEGETATION, REDUCING SALINITY AND WEEDS ON RURAL AND NON-URBAN LEASEHOLDS

Through Biodiversity Incentives a total of 54 site management plans were developed engaging landowners on both rural and Government managed land in the ACT. On-ground works included: fencing (26km); tubestock plantings (31,500); direct seeding (57km); establishment of off-stream watering points (15); woody weed / WONS control in high conservation areas or areas adjoining those areas (over an area of 781ha). Total native revegetation achieved is 112ha, vegetation enhancement 91ha and native



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vegetation protected 53ha. Some project highlights follow.

- Castle Hill - major links from the highly valued woodland on Castle Hill directly into the Murrumbidgee River Corridor via drainage lines as they run across the entire width of a rural lease – fenced to protect an average 30m wide corridor. It also incorporates and enhances a number of remnant blocks within the lease. With this property lying centrally within the Castle Hill priority area – benefits to biodiversity conservation are very significant.



An additional site was fenced for Yellow Box / Red Gum Grassy Woodland remnant protection and riparian protection. More than 10% of this property has now been fenced for improved environmental outcomes through the Biodiversity Incentives project. Enhancement works (planting and direct seeding) have been established on 2 of the sites. A stretch of 3km along a gully has also been fenced off to reduce erosion and to allow revegetation to establish. Also at this site, 100ha of remnant native vegetation has also been fenced and protected.

- A significant area of interest for Biodiversity Incentives has been linking the Stoney Creek Reserve to The Pinnacle Nature Reserve. Several properties have been engaged in planting vegetation corridors and blocks to link high conservation woodland remnant areas within ex-forestry land on Mt Stromlo and the Molonglo River Corridor.



- Narrabundah Hill has been the site for several community planting events, including a Mothers' Day



planting with 250 people attending. A lot of attendees were keen to



plant a tree, or several trees, in memory of their mum. There is one very keen couple who volunteer one day a week to work on Narrabundah Hill as part of the Adopt-a-Patch program. They are maintaining the planting site through weed control, and replacement tubestock where necessary, as well as undertaking new plantings.

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- At a rural lease called ‘Murryong’, 2 km of a waterway that flows through the property was fenced and revegetation commenced. This extended a previous Rural Conservation Fund project and, when finished, will link two large stands of remnant native vegetation and protect the waterway.

- Greening Australia has had a long history at Rose cottage horse paddocks, with over 12 years of continuing projects. Through Biodiversity Incentives two previous plantings have been joined via a shelter belt subdividing the existing paddock. This also improves links to the remnant vegetation in Mugga Mugga Reserve.



Green Team Planting June 2006



Plantings July 2007

- The uptake of the funds for WONS and woody weed was strong. Preference was given to landholders with properties near large stands of remnant vegetation and areas protected under Nature Reserve/National Park.

- At ‘Elm Grove’ near Gungahlin a Serrated Tussock control and revegetation program was undertaken with the assistance of Biodiversity Incentives funding. The landowner fenced the 7ha area and undertook a three year spraying program to control the Tussock before direct seeding of local native species was carried out in Spring 2008. The site adjoins Mulligans Flat Nature Reserve.



Direct seeding Spring 2008



Serrated Tussock spraying

- On a rural property near Hall another Serrated Tussock control program was developed with the landowner, through which Biodiversity Incentives provided funding assistance for contract spraying, native grass,

eucalypt and acacia seed for hand seeding and volunteer assistance to get the work done. Once the spraying was complete the landowner organized for the local Rural Fire Service to undertake a controlled burn with the aim of reducing the Tussock biomass and providing an ash bed as site preparation for hand seeding. Two monitoring points have been established on the site which will measure the change in cover and species composition over time.



Prior to on-ground works



Hand seeding after spraying and burning

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The property was destocked several years ago and since then the landowner has been busy re-establishing native vegetation across the site. This project will not only enhance his existing plantings but also reduce the impacts of Serrated Tussock on his property and adjoining properties, as well as provide connectivity between the Murrumbidgee River Corridor, revegetation and remnant vegetation on adjoining properties.



- In the Majura area a landowner received funding to establish shelter belts on boundary and riparian areas, plus alternative stock water. The shelter belts will provide connectivity to native remnant vegetation on adjoining Majura Firing Range as well as on his property. The Green Team assisted with planting of the shelter belts.

MONITORING AND EVALUATING PROGRESS

- Biodiversity Incentives has also supported three Honours students from the Australian National University (ANU). The students have been monitoring revegetation sites in the ACT and looking at soil, species and cover at each site. The field work component is now complete and the work is currently being written up.

These projects look at a range of questions around the function and health of revegetation including:

- What is the carbon value of direct seeded revegetation? (Charles Lowson)
- Soil function and soil carbon in direct seeded revegetation, including an assessment of the impact of grazing on soil health and function (Zoe Read)
- Survivorship and regeneration in direct seeded revegetation, which addresses the question of are revegetation plantings self-sustaining? (Bart Schneemann).

In addition to these projects Biodiversity Incentives co-funded two additional honours projects that will be undertaken in second semester 2008. These include;

- Population genetics of Yellow Box (*Eucalyptus melliodora*)
 - Native plant regeneration in the Lower Cotter Catchment
- 16 monitoring sites have been established across a selection of sites and this monitoring is regularly undertaken by two dedicated volunteers, as well as GA employees.



ACT LAND KEEPERS – SUMMARY OF PROJECT ACHIEVEMENTS

COMMUNITY ENGAGEMENT AND AWARENESS RAISING

Biodiversity Incentives funded eight field days/training events, highlights were:

- The project assisted the ‘Conserving the ACT’s lowland native vegetation: which way forward?’ community forum on the 15th March 2006 hosted by the Conservation Council of the SE Region and Canberra. The forum aimed to have a broad ranging discussion on how we can best conserve lowland vegetation in the ACT for future generations. Speakers discussed approaches to native vegetation protection in different jurisdictions, what lessons can be learned, what systems could be appropriate for the ACT. There was an opportunity for a wide range of interests, including from governments, community groups, land managers, researchers and interested individuals to put their views.

- A half-day forum ‘Truth About Trees’, was held to raise awareness and learn more about the role and value of paddock trees in grazing systems. Particularly, how trees affect water availability, soil organic matter, nutrient cycling, grass sward composition and growth.

Melinda McHenry from the University of New England and Dr Brian Wilson from the NSW Department of Natural Resources discussed their research into the interactions between trees, soils and grazing productivity. The forum featured both indoor and outdoor presentations from Melinda and Brian at the Australian National Botanic Gardens.



- Open farm days were held to demonstrate and encourage land managers in the protection and conservation of Lowland Woodland vegetation communities. Two open farm days which were held in spring/ summer 2006 covered issues in relation to woodland management:

1. Open Farm 1 was held on two properties ‘Fairvale’ & ‘Riverview’ along the Cotter Road, Canberra. ‘Fairvale’ is a 470 ha Angus stud grazing property which features remnant bushland, native grasslands and large scale revegetation. ‘Riverview’ is a 250 ha horse agistment property with remnant vegetation and revegetation with Murrumbidgee River Corridor frontage. Topics of interest included woodlands, weed and pasture management, revegetation and paddock tree management. Key speakers and contributors included Owen Whitaker (Natural Capital) providing detailed advice on grazing management of grassland and woodland vegetation, Kim Pullen (CSIRO) discussed issues concerning scale insect and eucalyptus dieback, Gerry Nussio (Lions Youth Haven) provided information on soil tests carried out on ‘Fairvale’ and the importance of soil fungi.



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2. Open Farm 3 was held at ‘Spring Plain’ west of Cooma and ‘Blacks Springs’ near Bredbo. ‘Spring Plain’ is 800 ha sheep and goat grazing property with native vegetation and open woodland on basalt and shale. ‘Black Springs’ is 40 ha property with natural grasslands and woodlands and features a serrated tussock control and grassland restoration project. Topics of interest included managing native grasslands and woodlands, and weed control. Key speakers and contributors David Eddy (Monaro Grassland Conservation Management Network) providing detailed advice on grassland and woodland management, Liz Lindsay (CSIRO Entomology) discussed the importance of soil organisms, litter and nutrient cycling in woodland communities.



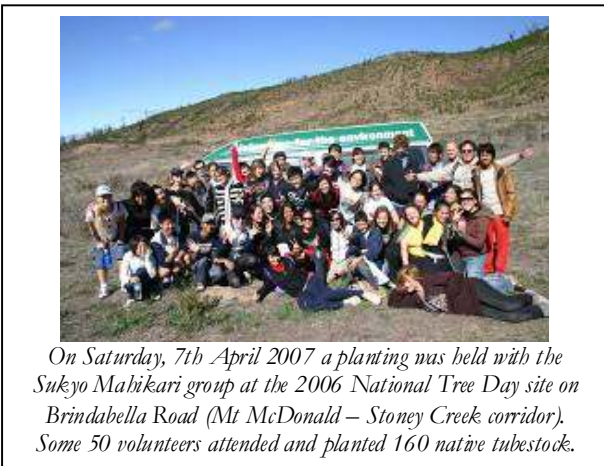
Open Farm day participants amongst the woodland remnant at ‘Spring Plain’

- Training has been a key element in engaging the community in the protection and conservation of Lowland Woodland vegetation communities. A training day was held in September 2006, training community members how to use the Grassy Ecosystems Management kit. The Grassy Ecosystems Management kit is a tool used to develop a management plan for woodland vegetation communities. The event was held at the Namadgi Visitors Centre using the Woodland nearby as a case study.



Participants conducting a vegetation survey while learning how to use the Grassy Ecosystems Management kit

- Biodiversity Incentives also hosted several community events such as planting, seed collecting and seed propagating activities. Two highlight events were:



On Saturday, 7th April 2007 a planting was held with the Sukyo Mahikari group at the 2006 National Tree Day site on Brindabella Road (Mt McDonald – Stoney Creek corridor). Some 50 volunteers attended and planted 160 native tubestock.



On Sunday 13th May 2007 we held our Mother’s Day planting on Narrabundah Hill, with more than 400 volunteers taking part and 2000 native tubestock planted.

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IMPROVING WATER QUALITY AND REDUCING SEDIMENTATION INTO RIPARIAN ZONES

ACT River Rescue was another component of ACT Land Keepers, wholly funded by the ACT Government as an in-kind cash contribution towards Biodiversity Incentives. A summary of ACT River Rescue achievements follows:

Outputs (totals to date)	Committed	\$
Tubestock planted (no) inc tree guards	130478	143,411
Fencing (km)	28	89,598
Direct Seeding (km)	90	18,000
Hand Seeding (kg)	4	1,227
Site Prep, weed control & other on-ground works		164,270
Stock water		48,900
Earthworks		40,231
Weed control (ha)	190	
River stabilisation/restoration (km)	30.3	
Revegetation established (ha)	297	
Native Veg Enhanced/ Protected (ha)	63	
Site management plans	61	
Monitoring sites	2	
Total		505,637

The following pictures are of one River Rescue site which involved the restoration of a disused quarry site. The aim of the project was to improve water quality by reducing sediment flowing into Paddy's River above a known Macquarie Perch breeding site, an endangered fish species.



Cave Quarry – 2006 before revegetation



Caves Quarry – July 2007 After planting



Caves Quarry – December 2007



Caves Quarry – 2008

GREENING INDUSTRY LANDCARE

PROJECT OUTCOMES

- Employment of a 0.2FTE capacity building position to coordinate the project. The position coordinated information forums and field events, conducted site visits, developed management plans, assisted in vegetation establishment, species selection, sourcing and propagating of local seed, distribution of seeds and plants to sites, ongoing support to land managers, assistance with monitoring, assistance with volunteers, promoted and reported on the project.
- A variety of Industry groups engaged including; horse agistments, wholesale nursery operators, commercial and private seed collectors, commercial orchard growers, grape growers, rural and peri urban land managers and industrial business.
- 2 Training workshops and 4 field days/presentations for Industry groups and general community. 261 participants at events. The project did not intend to host as many events however as the initial EMS workshop could not be held funds for this event were able to be spent on hosting more information sessions.
- 15 works agreements developed with 12 land managers. Including the development of management plans and site visits.
- 13 hectares has been fenced, planted and or seeded
- 2 kilometers of fencing erected. The project expected to spend more funding on fencing however as many of the properties did not have grazing stock fencing was not required.
- 2,440 tubestock planted with local provenance seed
- 3 kilometers of direct seeding seeded with local provenance. The project intended to direct seed more kilometers, however the results of just 3 kilometers showed very poor germination and therefore further direct seeding was not recommended.
- 2 sites have been monitored, data entered and analysis of data is being assessed
- 8 hectares of SPA were designed, management plans developed and planting commenced.
- Production of a SPA brochure which was not intended when the project first commenced, however it was critical in promoting and providing information on SPA establishment.

MAIN ACHIEVEMENTS

SEED PRODUCTION AREAS

A major achievement for Greening Industry Landcare was engaging mixed farming enterprises in the establishment of Seed Production Areas. Greening Industry targeted horticultural and other intensive agricultural enterprises to implement conservation work. After meeting with many land managers and discussing conservation options many land managers only had small areas to undertake works. These areas were ideal for the establishment of Seed Production Areas and were a welcome suggestion from land managers.

Greening Industry Landcare engaged 8 horticultural and agricultural enterprises in the design and implementation of SPA's. Greening Industry Landcare sought local provenance seed for all sites and worked with the Indigenous Community Nursery Network project to propagate and grow SPA plants.

Approximately 8 hectares has been set aside for SPA's, with 3 kilometers of direct seeding and 1,945 seedlings planted using local provenance seeds.

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Many sites required substantial site preparation including ripping, mounding, spraying, mulching, irrigation and weed matting. On going management from both Greening Industry Landcare project officer and the land managers will be required to maintain the site and collect seed.



The SPA's will start producing seed in the next few years and will become a significant resource for future revegetation projects.

INTRODUCING SEED PRODUCTION AREAS BROCHURE

An unexpected highlight for Greening Industry Landcare was the production of a brochure, 'Introducing Seed Production Areas – An Answer to Native Seed Shortages'. The brochure was produced after many questions were raised by both project coordinator, land managers and other stakeholders interested in setting up SPA's. The brochure provides information on; types of SPA's, things to consider, tips on species selection, site establishment, harvesting and storing seed. 500 copies were produced and distributed to industry groups and land managers. The brochure is also available nationally on the Florabank website, www.florabank.org.au.

GREENING INDUSTRIES LANDCARE COMMUNITY FORUMS

Another major achievement for Greening Industry Landcare was hosting Information seminars to raise awareness and encourage further involvement from horticultural and agricultural enterprises.

A full day forum 'Serious About Seeds' was jointly organized by Greening Industry Landcare and the Seeds for Survival project. The forum was a great opportunity for people from all walks of life to discuss native seed issues and to learn more about the practical establishment of native seed production areas. The day featured special presentations from those-in-the-know, plus a field walk at a prospective seed production area at Yarralumla Nursery's Pialligo Farm.

Presenters were:

- Ben Cavuoto - Seeds for Survival project
- Sarah Sharp - Guidelines for Using Native Seed in Revegetation
- Linda Broadhurst - Plant genetics: Implications for Seed Collection, Production and Use



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- Martin Driver– Lessons from the Murray Catchment
- Paul Gibson-Roy - Growing Seed for Grassland Restoration
- John Weatherstone - Growing, Managing and Distributing Seed

The forum generated interest from local land managers to become involved in setting up their own seed production areas.

Greening Industry Landcare coordinated 4 large community information events and 3 smaller presentations and field trips with over 260 participants involved in these events.

PROTECTION OF Paddock TREES

Greening Industry Landcare implemented a trial to protect *Eucalyptus melliodora* (Yellow Box) from horses ringbarking and killing tree. A trial was established on a horse agistment property in Kambah. Tree guards using galvanized piping were erected around 7 Yellow Box trees. Observations from the land manager have reported that the guards are proving to be successful with horses unable to chew bark.



INDUSTRIAL WETLAND

A final highlight in the project was restoring a man made wetland on industrial land adjacent to a workshop in Hume. With concerns from the land manager and business owner that pressure from development of surrounding industrial blocks will negatively affect frog habitat the site required restoration and preservation. An ecologist/consultant was engaged by the land manager to survey the site and produced a report on 'improving wetland habitat values'. Five frog species were identified in the wetland/dam area, and an additional species of tree frog was also subsequently identified in an adjoining area. The block had a small spring which feeds the wetland area, draining into a man-made dam lower down the block. Some revegetation with Casuarinas had been done in the past few years. A management plan for the site was developed to revegetate the dam with native grasses and sedges, with selective plantings of native shrubs and trees across the site, and the construction of a boardwalk across the wetland was also designed. The new boardwalk offers some protection from visitor damage and also improves access for 'frog watchers'. The site has become a demonstration for conservation works in an industrial area.



ACT LAND KEEPERS – SUMMARY OF PROJECT ACHIEVEMENTS



Since the project commenced the Land Development Agency are currently planning the development of the surrounding industrial land. As part of the planning process they are currently investigating the design of a ‘green corridor’ which will maintain a native woodland to preserve the existing habitat and link to the Greening Industry Landcare wetland.

SEEDS FOR SURVIVAL

NATIVE SEED PRODUCTION, EDUCATION AND SUPPLY

PROJECT OUTCOMES

- Employment of a 1 FTE capacity building position to coordinate the project. The position:
- established a seedbank from scratch including all infrastructure, equipment, safety and database requirements
- coordinated seed collection and cleaning training events
- coordinated volunteer activities in seed collecting and cleaning and seed viability and germination testing
- organised and presented information forums and field events
- conducted site visits for seed collection and suitable seed prosecution areas
- planned and developed seed production area encompassing layout design, site selection and preparation, species selection, sourcing and propagating of local seed for parent tubestock, distribution of plants to sites, ongoing support to land managers, assistance with monitoring
- 1090 hours of volunteer time were put towards seedbank support either in the field collecting or in the seedbank, processing or testing seed
- Of the 283kg of seed collected 236kg of seed distributed for direct seeding and propagating. Only 165kg had been targeted over the life of the project
- Greater than predicted in the original targets, 38 community groups and 293 individuals were engaged in seed collecting and other seed supply operations such as cleaning and storage protocol.
- Greater than predicted in the original targets, 7 seed collectors actively supplying seed.
- 128 remnant vegetation areas covering 85ha were formally assessed for seed collecting with many more reconnaissance trips undertaken as part of other project duties
- Co-ordinate and deliver 47 events. Only 11 had been targeted
- Worked with 20 land managers committed to developing formal seed production areas (some co-funded from other sources). The drought and depth of planning involved has delayed completion but well in to establishment phase that involves a 10 year partnership agreement to supply seed back to the seedbank. At least 10,000 plants involved across 40 different understorey species. The original target was 50 sites mapped but the definition of SPAs has altered during this project period to focus on formal planting designs. This new development in SPAs will maximise seed quality through applying horticultural practices while having greater control over genetic implications. Greater management responsibilities are required than the original wild seed production areas envisaged.
- Published 3 brochures, 2 more than targeted, to educate and encourage best practice in seed production area establishment and collection guidelines for the ACT
- The research study upgraded & refocused. CSIRO are currently advertising for a PhD student to commence research into Yellow Box genetics. Delays in commencing were a result of revising the research topic to one of greater need, upgrade of researcher from an honours student to PHD and greater CSIRO commitment i.e. To supervise student on-site

MAIN ACHIEVEMENTS

1. COORDINATION OF NATIVE SEED COLLECTION, PROCESSING, STORAGE, RECORDING AND SUPPLY FOR THE TERRITORY

1i. Establishment of Community Seed Bank

Premises: Successful partnership arrangement with the Australian National Botanic Gardens (ANBG), Canberra.

Employment of Seedbank Coordinator: Successfully employed by Greening Australia to manage the collection, storage and distribution of local native seed and to engage with community and seed collectors.

Office & Processing Facilities within the ANBG:

- Seedbank office & volunteer room
- Glasshouse & polyhouse* (seed drying)
- Seed cleaning room
- Laboratory use (e.g. incubators for seed germination testing, high powered microscopes for seed viability testing & plant identification)
- Seed storage facilities e.g. Cool rooms
- Conference room facilities
- ANU offered use of glasshouses for seed drying but they were damaged in hailstorm

**Located off site*

Equipment: 17 Sieve set with Catch tray & lid, Kimseed Vacuum Separator (with Stand & Continuous flow attachment), Kimseed Seed cleaner (inc stand, bins & 10 screens), Kimseed Multi thresher, Seed Scarifier, Computer & database software

1 ii. Project Partners/Steering committee

Greening Australia: project co-ordination, use of facilities & equipment, access to technical support, technical group representation, IT support, data & financial management, training and volunteer management office services

ANBG: location, use of facilities & equipment, access to technical support, technical working group representation

CSIRO (Plant industries): Technical support &, technical working group representation

Territory and Municipal Services (TAMS) (formerly Canberra Urban Parks and Places, (CUPP): Technical support &, technical working group representation

Billabong Aboriginal Corporation: Provide land for polyhouse (ANBG)



Volunteers outside the seedbank office at the ANBG



Office facilities at the ANBG



2. COMMUNITY EDUCATION AND TRAINING OF NATIVE SEED COLLECTION AND MANAGEMENT TECHNIQUES

Greening Australia successfully developed a training program with 38 different groups including private seed collectors, Landcare and Parkcare groups, community volunteers, schools and rural property managers.

Education and training

Seed collection workshops: 34 events with 221 participants

Processing & storage techniques & treatments: 12 events with 66 participants for seed cleaning & drying, 1 event with 6 participants for seed viability & germination testing

Seed Production Area establishment: 2 formal events

- *Serious About Seeds* information day – 115 participants
- *Provenance in Perspective* Forum- 42 participants

Tours of the Seedbank: 15 Groups ranging from Commonwealth and State Govt. agencies to NRM interest groups.

Training resources: A plant and seed herbarium was established to assist with plant identifications in addition to a substantial botanical reference of collection books & CD's. Different training packages were produced to suit the type of training event.

Train the trainer:

The seedbank co-ordinator attended several events to increase knowledge & networks

- Conferences Seed Ecology II Conference; Perth WA
- Melbourne Indigenous seedbank
- Millennium Seedbank project at Melbourne & Mt. Annan Botanic Gardens
- University of Melbourne – Seedbank & Seed Production Areas *Grassy Groundcover Research*
- National Agricultural Association Educators Conference
- Veg Futures 2006- NRM Conference in the field- Albury.
- Media & marketing Training Course

TAMS (formerly CUPP) support and training:

Seed from the former Waramanga Seed depot was relocated to the Greening Australia seedbank. A significant amount of time was spent cleaning and repackaging lots according to Florabank standards before despatched as needed. TAMS staff were regularly engaged (and continue to be) in seed related training activities organised by Greening Australia

QUOTES

“This was an excellent presentation and I am grateful to Greening Australia to have been able to participate”

“Well presented informative, good resources and inspiring”

“An enjoyable and interesting day- Given me ideas for future use of our land in terms of conservation of areas and seed production sites either as windbreaks or planted areas.”

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Seed collection workshops



ACT LAND KEEPERS – SUMMARY OF PROJECT ACHIEVEMENTS



Seed collection training for all ages



Seed cleaning training for all ages



Seed viability and germination training

ACT LAND KEEPERS – SUMMARY OF PROJECT ACHIEVEMENTS

Forums



Project Networking

The many stakeholders involved with event participation, presentations, promotions, and extension work and property access for seed collection:

- Private landholders
- Interested members of the Canberra community
- Australian National University; staff, students, ground staff
- Catchment/Landcare / Parkcare Groups: Bombay, Mt. Taylor, Cooleman Ridge, Friends of Aranda Sutton, Murrumbateman, Michelago, Jerrawa, Friends of Tidbinbilla, Queanbeyan, Mt. Majura, Ginninderra, Molonglo, Bega, Upper Murrumbidgee Catchment Coordinating Committee (UMCCC), Bredbo, Southern ACT, Shine network,
- Parks Conservation & Lands: Namadgi, Brindabella, Tidbinbilla,
- Farm consultants
- CSIRO staff
- Dept. of Defence
- ANBG staff & guides
- Catchment Management Authorities – Murrumbidgee, Lachlan and Southern Rivers
- Australian Native Plant Society
- Canberra Ornithologists
- Aboriginal groups/ support networks: On Track –indigenous youth, Billabong Aboriginal Corporation, ANBG Education Dept, Standing Committee on Planning & Environment ACT, Legislative Assembly Committee office
- Department of Agriculture Fisheries and Forestry
- Conservation Volunteers Australia
- Dept. Water, Heritage Environment & Arts
- Australian Native Plant Society
- Australian Network for Plant Conservation
- Natural Resource Management (NRM) Advisory Council
- Canberra International Arboretum & Gardens project
- Batemans Bay Botanic Gardens
- Cooma Challenge Disability (Adult disability working group)
- Canberra Institute of Technology (CIT)
- Rural lands protection Boards: Yass, Braidwood, Cooma
- FORDE residential development

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- ACT Dept. of Education
- Department of Environment and Climate Change (DECC)
- Yarralumla Nursery
- Council- Queanbeyan City
- Kosciuszko to Coast (K2C) project partners



Parks Conservation and Lands staff Seed collecting



Keimyung University guided flora tour



Community Landcare seed collecting



GreenCorps cleaning seed

Indigenous Engagement

The “On Track” program for primary school children in the ACT aimed to help them reconnect to some of the traditional knowledge of their ancestors through hands-on experience in seed collection and the identification of local bush food plant species (as well as other NRM activities around Canberra). Jointly coordinated by a dedicated group of Aboriginal mentors, staff from Greening Australia Capital Region and Parks, Conservation and Lands

At Billabong Aboriginal Corporation scoping work was undertaken to assess the feasibility of seed storage and seed production areas to complement a nursery production partnership with Greening Australia’s Indigenous Community Nursery Network Project. As a result a large arid zone poly tunnel for seed drying was donated from the ANBG for Greening Australia use and erected at Billabong Aboriginal Corporation.

ACT LAND KEEPERS – SUMMARY OF PROJECT ACHIEVEMENTS



3. IDENTIFICATION OF SEED COLLECTION SITES AND DEVELOPMENT OF INCENTIVES TO FOSTER AND ENCOURAGE CONTRACT SEED COLLECTORS

3i. Seed collection site identification, collection, recording & mapping

To June 2008 283 kg approximating 170 species have been collected. During the entire project suitable seed collection sites were logged. These records proved invaluable to streamlining field searches.

For all seed collections a field data sheet was used according to Florabank standards. It was specially modified by the project to record vital provenance data as recommended by genetic experts.

A comprehensive seed supply database was operated through out the duration of the project and continues to be used. Its functions accommodate seed lot entry and dispatch, the recording of seed quantities, species, collectors, and clients among other things. Reports can also be generated. Recording GPS points for each seed collection enables map production. These maps can be generated to provide a visual representation of where seed was collected from and used.





3ii. Engage a Network of collector's seed collecting

Through extension work and 49 formal events specialising in seed supply (collection, processing & storage techniques & treatments) both volunteers and commercial suppliers have helped provide seed. There has been close liaison with the project co-ordinator to source relevant species from relevant locations.

7 commercial seed suppliers have collected 116 plant species over the past 3 years to varying degrees of involvement.

1090 hours of volunteer time were put towards seedbank support either in the field collecting or in the seedbank, processing or testing seed. Volunteers have been invaluable in the collection and storage processes across the ACT & nearby NSW collection locations with the added bonus of them increasing their own knowledge and skills

Significant effort has been put towards linking seed to project needs. By identifying what species are needed seed and resources has not been wasted and projects completed properly.

The seed collector's network continues to build in momentum and expertise.





4. ESTABLISHMENT OF SEED PRODUCTION AREAS (SPA'S) FOCUSING ON SHRUB AND UNDERSTOREY SPECIES ON LEASED AND FREEHOLD LAND IN AND AROUND THE TERRITORY

4i Seed Production Areas

20 people have registered as SPA partners after many enquiries. They are located across the ACT and nearby NSW. Some of these SPAs especially the older ones are co-funded through other funding sources.

Part of the partnering process required landholders & Greening Australia to sign a 10 year contract agreement formally recognising each party's respective obligations' under the partnership.

Progress at each SPA has been highly dependant on when landholders became involved and personal circumstances. The older sites have commenced some seed harvesting but the majority are still at the establishment or early growing phase. The more recently recruited sites will have parent seed propagated for them this growing season (2009) based on SPA designs and the availability of species specific seed.

Most SPAs are formal (i.e. orchard type rows) and less than 1 hectare. The smaller SPAs are planted with understorey or smaller shrubs while the larger sized sites have large shrubs to small trees.

SPA sites generally have been limited to 6-8 species per site with restrictions placed on plants from the same genus. For genetic purposes the aim is to have at least 200 plants for the same species at each site planted in blocks to improve pollination and ease of harvest.

40 species have so far been selected for SPA inclusion with the potential for another 30 species. The project has worked closely with Greening Australia's Indigenous Community Nursery Network project to propagate and grow all SPA plants fro provenance surety.

In 2010 it is predicted 15,000+ plants will be managed in SPA's to complement wild seed collection sources in and around the ACT. As the SPA sites mature monitoring will be refined.

Such is the lead that Greening Australia has in SPA development that two publications have been produced and talks presented in Western Australia in addition to enquires received from govt

ACT LAND KEEPERS – SUMMARY OF PROJECT ACHIEVEMENTS

agencies (such as the Road Transport Authority (RTA) and Catchment Management Authority's (CMA)) and mining



4ii Conduct Research

Genetic Research advice from CSIRO identified a pressing research topic to explore, *Population Genetics of Eucalyptus melliodora* (Yellow Box) i.e. Tracking the genetic movement of Yellow Box on the Southern Tablelands between remnant vegetation and plantings. Such was the importance identified of this research that this is now a PhD not an honours project supervised through CSIRO.

VEGLINK

COMMUNITY VOLUNTEER COORDINATION

PROJECT OUTCOMES

- Groups engaged: 7 scientific agencies, 26 schools, 7 businesses and corporates, 10 government agencies and departments, 36 community groups
- 3753 individual volunteers have attended at least one VegLink or Lower Cotter event.
- 21,964 volunteer hours
- 3,950 active volunteers
- 350 VegLink events including 140 Aranda nursery sessions, 86 Green Team events, 50 Adopt-A-Patch events
- 48 seed propagation events
- 42 major planting events
- 240,610 plants propagated
- 68,004 tubestock planted (co-funded)
- Completed 378 ha of revegetation using local provenance species
- 7 kg of hand seeding
- Completed 2 km of revegetation in riparian zones
- Enhanced 6 ha and protected 2 ha of remnant vegetation
- Protected 14 ha, enhanced 0.4 ha, restored 3 ha and 1 km of riparian vegetation
- Completed 455 ha of weed control
- Training events/field days/bus tours, 6 bird identification tours, 2 mountain bike tours of the Lower Cotter, 25 presentations.

MAIN ACHIEVEMENTS

1. ENGAGE A CROSS-SECTION OF ACT VOLUNTEERS

Groups

The VegLink program engaged a large number of groups and individuals in activities that addressed multiple NRM issues. The following is a list of organisations that have participated in the VegLink program:

Schools

- Aranda Primary School
- Arawang Primary School
- Birragai Outdoor School
- Bonython Primary School
- Burgmann Anglican School
- Canberra Girls Grammar School
- Chapman Primary School
- Charles Conder Primary School
- Curtin Primary School
- Daramalan College
- Fraser Primary School
- Hall Primary School
- Holy Trinity School
- Isabella Primary School
- Kambah High School
- Lanyon High School
- North Ainslie Primary School
- Orana School
- St Francis High School
- St Clares College
- St Judes Primary School
- St Thomas Primary School
- Stromlo High School
- Tharwa Public School
- Tuggeranong Home Schooling
- Turner Primary School

Community and other groups

- 666 ABC Canberra
- ACT Motorcycle Club
- ANU College
- ANU Mountaineering Club
- ANU Scuba Club
- Aranda Residents Group
- Arawang Community
- Horse Paddock Group
 - AROC (Adventure Racing Outdoor Challenges)
 - Auburn University Study Group
 - Australian Landcare Council
 - Badimara Scout Group
 - Brindabella Motor Sports Club
 - Canberra Off-Road Cyclists
 - China National Forestry Economics and Development
 - Church of Jesus Christ of Latter Day Saints (Mormons)
 - Conservation Volunteers Australia
 - CSIRO's Double Helix Science Club
 - Friends of Aranda Bushland
 - Friends of Grasslands

Scientific agencies

- Australian National University
- ANU School of Forestry
- CSIRO Plant Industry
- CSIRO Entomology
- CSIRO Sustainable Ecosystems
- Fenner School of Environment and Society
- Research and Planning (ACT Parks, Conservation and Lands)
- Land & Water Australia

Businesses and corporates

- Australian Ethical Investors
- Café Brindabella
- GIO
- DLA Phillips Fox
- PricewaterhouseCoopers
- KPMG
- Zoo (Advertising & Communications Company)

- Friends of Mount Painter Park Care Group
- Ginninderra Catchment Group
- Greening Australia National Board
- Great Artesian Basin Coordinating Committee
- Green Corps
- Gungahlin Community Centre
- Korean Exchange Students
- Macarthur Scout Group
- Molonglo Volunteer Bushfire Brigade
- Molonglo Catchment Group
- Murrumbateman Landcare Group
- Orienteering ACT
- Pedal Power
- Pialligo Residence Assoc AGM
- Rivers Volunteer Bushfire Brigade
- Rivers SES Unit
- Sai Community
- Soul in the City Conference
- Southern ACT Catchment Group
- Southern Cross Health Club
- Sukyo Mahikari
- Trees for Mum
- World Youth Day participants 2008

Government

- ACT Corrective Services
- ACT NRM Council
- ACT Parks, Conservation & Lands
- Air Services Australia
- Australian Federal Police
- Australian Government Department of Agriculture, Fisheries and Forestry
- Australian Government Department of the Environment, Water, Heritage and the Arts
- Australian Government Department of Foreign Affairs and Trade
- Australian Government Department of Veterans' Affairs
- Australian National Botanic Gardens
- Canberra Stadium

ACT LAND KEEPERS – SUMMARY OF PROJECT ACHIEVEMENTS

Special mention should be made of Café Brindabella, which is located in Barton within the Department of Foreign Affairs and Trade (DFAT) building. Café Brindabella has raised significant money for greening activities in the ACT by placing a levy on disposable cups, and catered for several planting events involving DFAT staff and community volunteers.



Skye and Jack Palmer from Café Brindabella on the slopes of Mt McDonald in 2005.

Staff from ACT Parks, Conservation and Lands (PCL), the Australian Government Department of Environment, Water, Heritage and the Arts (DEWHA) and the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF) have participated in a planting each year of the VegLink program (and for several years before that as well). The following table has details of each planting.

Agency	Date	Location	Participants	Plants
DEWHA	14/9/2005	Murrays Corner	62	1500
DAFF	23/9/2005	Mt McDonald	12	340
Environment ACT	7/6/2006	Cotter Dam	30	500
DEWHA/DAFF	24/8/2006	Mt McDonald	87	1500
DAFF	22/9/2006	Cotter Dam	25	400
DAFF	31/8/2007	Lower Cotter	19	394
DEWHA/DAFF/PCL	6/9/2007	Lower Cotter	61	1469



61 staff from DAFF, DEWHA, PCL and Land & Water Australia attended a planting along Bullock Paddock Road in August 2007, planting 1469 trees. The above volunteer is appropriately dressed in a boiler suit, considering the rugged conditions in the Lower Cotter Catchment.



Stephen Young of Rivers Volunteer Bushfire Brigade at the World Environment Day planting in June 2008. Stephen has attended dozens of Bushfire Recovery and VegLink planting events between 2004 and 2008.

Members of the Rivers Volunteer Bushfire Brigade have provided water for plantings from the very start of Bushfire Recovery, the program which preceded VegLink. They have been assisted at various times by members of the Parks Brigade and the Molonglo Brigade.

Individuals

Since 1 January 2005 (when VegLink commenced), **3753** individual volunteers have attended at least one VegLink or Lower Cotter event. This figure does not include the thousands of school students and corporate and government volunteers who are not registered on Green Australia’s volunteer database. If these volunteers are included, it is not unreasonable to double the number of volunteers who have attended a VegLink or Lower Cotter event since 2005.



Jack Walters has attended over 100 VegLink events since 2005. He has also attended dozens of other events. He is a regular Wednesday morning volunteer in the Aranda nursery, has attended Green Team activities, and of course turned up to dozens of community plantings in the Lower Cotter Catchment. Jack is one of hundreds of VegLink volunteers who have attended multiple events. Greening Australia relies heavily on such regular volunteers to achieve project objectives.

These individuals have contributed **21,964** volunteer hours since 1 January 2005 as recorded on the Greening Australia database. Veglink has contributed significantly to Greening Australia’s volunteer database, which has currently active **3,950** volunteers.

N.B. A number of events have been co-funded by VegLink and other ACT programs including Seeds for Survival, Biodiversity Incentives, the Indigenous Community Nursery Network (ICNN) and the Lower Cotter Catchment project. Final reports have been compiled for the Seeds for Survival, Biodiversity Incentives and the ICNN programs. Lower Cotter volunteer statistics are included in this VegLink report.

Wednesday Nursery Volunteers (co-funded)

Each Wednesday morning during school term a group of volunteers turn up at the Greening Australia community nursery to undertake a range of nursery tasks such as



Wednesday Nursery Volunteers

propagations, transplanting seedlings, thinning tubestock, and preparing plant orders. **140** Wednesday nursery sessions have occurred between January 2005 and June 2008.

Green Team (co-funded)

A regular team of volunteers was established in mid-2006 called the Green Team. The Green Team has since met on a weekly basis, undertaking a range of NRM activities at many sites around the ACT such as seed collecting, seed cleaning, propagating, planting, and maintaining planting sites. There have been **86** Green Team events to June 2008.



Regular Green Team members Theresa Layton and John Sutton planting eucalypts at CSIRO’s Giminderra Farm in August 2007 (a Green Gateway site).

ACT LAND KEEPERS – SUMMARY OF PROJECT ACHIEVEMENTS

Adopt-A-Patch (co-funded)

Another VegLink volunteering initiative is Adopt-A-Patch. The Adopt-A-Patch sub-program has expanded on the original schools initiative to involve regular volunteers (see Adopt-A-Patch section below). Three Adopt-A-Patch (AAP) teams of 2-3 volunteers regularly plant tubestock, broadcast seed, and maintain particular sites in the Lower Cotter Catchment and near Stromlo. The original AAP team, David and Meredith Hatherly, had planted 2700 native trees and shrubs on Narrabundah Hill (a Biodiversity Incentives site) by June 2008. Approximately **50** AAP outings had occurred by June 2008.



*David & Meredith Hatherly
planting in the Pierces Creek area in 2008.*

**2. SEED COLLECTION AND PROPAGATION,
MONITORING AND EVALUATION,
REVEGETATION AND WEED CONTROL**

Volunteers have participated in over **350** VegLink, Seeds for Survival, ICNN and Lower Cotter events, taking in all aspects of revegetation work, including seed collecting, seed propagating, nursery work, planting, site maintenance and monitoring.

Seed collection

Refer to the Seeds for Survival, Page 15.

Propagations

Schools, Wednesday nursery volunteers, and community groups propagated **103,200** plants between 1 January 2005 and 30 June 2008. The total number of plants propagated during the VegLink period is **240,610** (which includes ICNN propagations).



*KPMG Propagation, Friday 7 December 2007, ANBG (93 volunteers,
16,140 plants propagated)*



*Mary Porter and Mick Gentleman at a propagation event in November
2005 held at the Australian National Botanic Gardens.*

Monitoring and evaluation



VegLink continued a monitoring program which was set up with NHT 1 funding (1998 – 2004, photo above). The VegLink monitoring program also involved several Greening Australia volunteers monitoring the survival rate of community plantings since 2006. Monitoring sites have been established on the eastern and western slopes of Mt McDonald, Murrays Corner, Pierces Creek area, Bullock Paddock Road at Uriarra, and Narrabundah Hill. The survival rate for community plantings from 2005 to 2008 has averaged 70%, which is excellent in the context of a drying climate. There are **12** ongoing monitoring sites.



Sarah Hnatiuk has spent hundreds of hours monitoring the survival rate of community plantings.

Revegetation

Community plantings have been the most high profile on-ground activity of VegLink. Thousands of volunteers have participated, with many of them motivated to regreen the bushfire-affected landscapes to the west of Canberra. Since 2004, as part of Bushfire Recovery, VegLink and the Lower Cotter projects, community volunteers have planted over **135,000** native trees, shrubs and grasses on former pine plantations. Revegetation efforts since 2005 have focused on the eastern slopes of Mt McDonald and the Lower Cotter catchment. VegLink has also supported several community groups (such as Park Care) in their efforts to revegetate their local patch.

- Tubestock funded by VegLink: **24,362**
- Tubestock funded by Lower Cotter Catchment: **43,642**
- Hectares of revegetation: **93** ha (VegLink) and **285** ha (Lower Cotter)

ACT LAND KEEPERS – SUMMARY OF PROJECT ACHIEVEMENTS

Some highlight planting events include:

1. Treathlon, June 2005, Mt McDonald. This was the second treathlon involving VegLink volunteers and members of Orienteering ACT (co-funded).



Two of the competitors in the Treathlon on Mt McDonald in June 2005.

2. National Tree Day, Sunday 31 July 2005, Mt McDonald (**450** volunteers, **5000** trees planted). This was the largest ACT Land Keepers community volunteer event in 2005, and volunteers negotiated quite steep sections.



*A family getting stuck in on National Tree Day 2005. This photo indicates the steepness of the eastern slopes of Mt McDonald.
Photo: Julian Robinson*

3. St Patrick's Day Planting with 666 ABC Canberra, Saturday 17 March 2007, western slopes of Mt McDonald (**120** volunteers, **1400** trees planted)



Carolyn Ludovic and Trina Evans of 666 ABC Canberra getting into the spirit of St Patrick's Day 2007.

ACT LAND KEEPERS – SUMMARY OF PROJECT ACHIEVEMENTS

4. National Tree Day Planting, Sunday 29 July 2007, Lower Cotter (**330** volunteers, **5200** trees planted)



John Feint serving lunch to volunteers on National Tree Day 2007. John is a leader with Macarthur Scout Group, which has catered for dozens of VegLink events.

5. Brindabella Motor Sports Club planting, April 2006, Mt McDonald.



Hopefully these children will plant enough trees in the future to offset their vehicle emissions.

6. 666 ABC Canberra Planting, Sunday 6 April 2008, Uriarra Forest, Lower Cotter (**470** volunteers, **5923** trees planted)



This VegLink planting was the largest ever, both in terms of volunteers and trees in the ground. 666 ABC Canberra are a key media partner for Greening Australia.

Weed control

Several volunteer events concentrated on removing pine wildlings on Mt McDonald in 2006 and 2007. VegLink completed **455** ha of weed control. VegLink also funded \$12,000 of weed control (spraying and labour) on sites such as the Science Works project on Black Mountain (see page 34).



Pine removal on Mt McDonald in March 2007.

Other activities: bird identification tours, fieldtrips/bus tours, walking tours and mountain bike tours

VegLink coordinated the following events:

- 17 training events/field days/bus tours;
- 6 bird identification tours;
- 2 mountain bike tours of the Lower Cotter;
- 25 presentations.



Greening Australia's in-house ornithologist, Nicki Taws, has led a number of bird ID events for the VegLink program. Here Nicki is sharing her knowledge with bird enthusiasts in the Australian National Botanic Gardens in April 2007.



Greening Australia has hosted three bus tours of VegLink planting sites for the community group Friends of Grasslands (FOG). Here Susie Wilson shares her expertise with FOG members near Condor Hill in the Uriarra section of the Lower Cotter Catchment.



Crank Up The Cotter mountain bike tour of the Lower Cotter in March 2007.

3. IMPROVE BIODIVERSITY AND PROTECT WATER QUALITY

The many VegLink plantings have dramatically improved biodiversity with understorey, mid storey and over storey provenance plant species being established on former monoculture pine plantation estate.

From 2006 onwards VegLink plantings focused on the Lower Cotter Catchment, in order to stabilize soil and therefore protect Canberra's water quality.

VegLink has:

- (i) Completed **378** ha of revegetation using local provenance species;
- (ii) Completed **2** km of revegetation in riparian zones;



This VegLink volunteer digs the need to establish native vegetation in order to protect the water quality of the Lower Cotter Catchment.

- (iii) Enhanced **6** ha and protected **2** ha of remnant vegetation; and
- (iv) Protected **14** ha, enhanced **0.4** ha, restored **3** ha and **1** km of riparian vegetation.

4. GREEN GATEWAYS, SCIENCE WORKS AND ADOPT-A-PATCH

Green Gateways

The Green Gateways sub-project was to undertake conservation works at one high profile site in each of the 3 ACT sub-catchments. These sites were to be used as demonstration sites to promote awareness of community involvement in nature conservation. Site partners were to include community, business and government departments.

One Green Gateways site was established in the Ginninderra catchment on CSIRO's Ginninderra Farm next to the Barton Highway. The site is very high profile, next to the main entrance into Canberra. A number of Eucalypt species have been planted since 2006 by groups such as the Sukyo Mahikari spiritual organisation, the Sai Community, students from Burgmann Anglican School, and Greening Australia's Green Team. It is hoped the trees will provide a seed source in future years.



GA's revegetation guru, Brian Cumberland (left), provides a planting demonstration to members of Sukyo Mahikari at the Green Gateways site in 2006.

The other sites identified as Green Gateway sites were a section of land behind the National Zoo and Aquarium, and Fairbairn Park, home of the ACT Motorcycle Club. The Zoo site did not proceed because of planning issues with the land, and the ACT Motorcycle Club has not been in a position to commit to on-ground works up until now. This project is still pending.

Science Works

The Science Works sub-project was also to identify 1 site in each of the 3 ACT sub-catchments, focusing on grasslands and riparian areas.

A Science Works site located west of Canberra looks at linking remnant vegetation from Murray's Hill to Paddy's River in former pine plantation at Murray's Corner. In September 2005, DEWHA (formerly DEH) and DAFF staff planted **1,500** plants to begin the link between the river and hill. The following



ANU students planting on Murray's Hill overlooking Paddy's River.

ACT LAND KEEPERS – SUMMARY OF PROJECT ACHIEVEMENTS

month ANU students completed the link to the top of the hill planting **400** plants.

A very successful Science Works site is a Black Mountain gully that runs through ANBG, CSIRO and ANU land. Staff from these government and science agencies teamed up with Greening Australia to develop and implement a restoration program for the gully. Activities included propagation and planting events involving staff and students from ANU, ANBG and CSIRO, and willow and woody weed removal by weed contractors. Following are some before and after monitoring photos.



Adopt-A-Patch

The original Adopt-A-Patch sub-program was to provide technical assistance and training to schools in each of the three ACT sub-catchments. Jeni Delandre, Greening Australia's schools liaison officer,

ACT LAND KEEPERS – SUMMARY OF PROJECT ACHIEVEMENTS

has conducted numerous propagation and planting events at **26** schools around the ACT, increasing the environmental knowledge of school students.



Jeni Dlandre helps manage Greening Australia's community nursery in Aranda, and has brought her horticultural knowledge to the Adopt-A-Patch sub-program. For example, Jeni has advised Lanyon High School on the management of the school glasshouse.



A group of young tree planters at Tharwa Primary School in 2005.

A number of schools have also participated in plantings in the Lower Cotter.

5. VOLUNTEER PROGRAM FOR OTHER COMMUNITY EVENTS / PROJECTS

Greening Australia staff have provided land management advice and tubestock to several Park Care groups in the ACT as part of the VegLink program. Staff have also attended a number of community events, including each year of the Cotter Bush Picnic. Greening Australia staff have run several different activities at the Cotter Bush Picnic, including propagations at the Cotter Reserve, a bird identification walk through community plantings on Mt McDonald, and a plant identification walk along the Cotter River. Greening Australia staff have also conducted a number of bus tours of community planting sites involving groups such as the ACT NRM Council.



100 Year 7 students from Canberra Girls Grammar School in the Lower Cotter Catchment in September 2007.



Cotter Bush Picnic 2008, Cotter Reserve



Ian Anderson, ornithologist with Canberra Ornithologists Group, led a group of volunteers on a bird identification walk on Mt McDonald at the Cotter Bush Picnic 2008.

INDIGENOUS COMMUNITY NURSERY NETWORK (ICNN)

PROJECT OUTCOMES

- Coordinate a network of nurseries growing known provenance plants and distribute to NRM land managers
- The ICNN project successfully coordinated the operation of four community provenance plant nurseries. The plants produced in these nurseries were used in various NRM projects in the region including:
 1. Park Care and Landcare Groups in the ACT and NSW (Friends of Mt Majura, Mt Painter, Friends of Googong, Michalego Landcare Group etc)
 2. Murrumbidgee River Corridor Project (Parks Conservation and Land)
 3. Namadgi National Park
 4. Greening Australia projects such as: Good Neighbours, Molonglo River, Biodiversity Incentives, Veglink, River Rescue, Growing Community Care for the Lower Cotter and Seed Production Areas (SPA's)
- The plants distributed to NRM projects have been recorded in the nursery database and can be track for future reference.
- Encourage indigenous participation in conservation activities
- The ICNN project has worked closely in the planning and implementation of the Billabong Aboriginal Corporation nursery in Holt ACT. In 2008, 60,000 local indigenous plants were propagated and used in NRM activities in the region. It was anticipated that the nursery would generate income in 2008 and have the ability to increase capacity in 2009, resulting in greater job opportunities for the Aboriginal community in the region.

MAIN ACHIEVEMENTS

INCREASED PROPAGATION AND DIVERSITY OF PROVENANCE PLANTS GROWN

Since the project has started the total number of provenance plants propagated in the nursery has increased from 39,000 (2006) to 70,000 in 2007 (See Table 1). The total number of different plants species grown in 2006 was 70. In 2007 it had increased to 90 (See Table 1). This has been improved in response to the ICNN project working closely with the Seeds for Survival project on seed demands and with other NRM land managers on species requirements. Species diversity in the nursery is also increasing as staff become more skilled in propagation requirements of hard to germinate plant species.

SEED PRODUCTION AREA (SPA) PLANTS PROPAGATED

The ICNN project has worked closely with the Seeds for Survival project to propagate parent plants for Seed Production Areas (SPA). ICNN has also assisted with the targeted collection of seed for these sites. The supply of provenance seed will improve species diversity and survival rates in revegetation works.



Landholders Seed Production Area

ACT LAND KEEPERS – SUMMARY OF PROJECT ACHIEVEMENTS

Improved species selection and numbers

The ICNN project has increased the availability of plant species diversity and numbers. This was achieved by working closely with staff and other organisations to propagate desired species and numbers for projects. More planning was carried out before the propagation season to determine plant numbers and species required. This has resulted in appropriate species and a greater diversity being revegetated in the landscape.

Improved quality of plant stock

Since the ICNN project began the overall plant quality has improved. This was achieved by experimenting with different potting mixes and the critical timing of propagation events. Good survival rates are being achieved in revegetation sites as robust healthy plants are being planted in well prepared sites.



NURSERY DATABASE AND NURSERY TAG LABELING SYSTEM

The development of a nursery database allows the nursery to manage and track plant stock. The database links to the Seeds for Survival and the Greening Australia landholder database. This allows the nursery to track plants to sites for monitoring and evaluation or seed collections in the future. The nursery tag labeling system has improved plant identification and tracking of specific seed batches of a known provenance. This has assisted in the management and maintenance of provenance plants in the nursery and also has improved the efficiency of community propagation events.

ACT LAND KEEPERS – SUMMARY OF PROJECT ACHIEVEMENTS



INCREASE INVOLVEMENT OF COMMUNITY VOLUNTEERS AND EVENTS

The ICNN project has increased community involvement in nursery activities by offering more events and diverse opportunities to volunteer in the nurseries. One popular event is the twilight propagations and thinning held at the Australian Botanical Gardens in the evenings.



THE ESTABLISHMENT OF A NETWORK OF NURSERIES TO SUPPLY PROVENANCE PLANTS

- Nursery setup and partnership formed at the Australian National Botanical Gardens to grow 40,000 provenance plants for revegetation activities
- Nursery setup and partnership formed at Lions Youth Haven Kambah to grow 40,000 local indigenous plants
- Continued improvements to the Aranda Greening Australia nursery
- Liaised with local commercial nurseries to purchase tubestock such as Tumut Community Nursery and McDonalds Farm Nursery
- Assisted Billabong Aboriginal Corporation to successfully setup a native plant nursery to supply the revegetation industry.

ACT LAND KEEPERS – SUMMARY OF PROJECT ACHIEVEMENTS



Setup of Youth Haven Nursery Kambah



Setup of nursery at Billabong Aboriginal Corporation 2008

SUPPORT OF COMMUNITY GROUPS, AGENCIES AND GOVERNMENT DEPARTMENTS

The ICNN project propagated plants and has provided technical information and support for community groups and other organisations such as:

- Carwoola Landcare Group
- Friends of Aranda Bushland
- Friends of Googong
- Friends of Mt Majura
- Ginninderra Catchment Group
- Gudgenby Bush Regeneration Group
- Michelago Landcare Group
- Molonglo Catchment Group
- Parks Conservation and Land: Lower Cotter Catchment rehabilitation
- Parks Conservation and Land: Murrumbidgee River Corridor Project
- Royalla Landcare Group
- Southern ACT Catchment Group
- Southern Tablelands Four Wheel Drive Club



Propagation and seed collection workshop with the Michelago Landcare Group 2008

INDIGENOUS PARTICIPATION

The ICNN project has worked closely in the planning and set up of the Billabong Aboriginal Corporation indigenous plant nursery in Canberra. Billabong Aboriginal Corporation has propagated 60,000 local indigenous plants for 2008. It is anticipated that the nursery will generate income this year and has the ability to increase its capacity for 2009, bringing greater job opportunities for the Aboriginal community in the ACT region.

The ICNN project provided Billabong Aboriginal Corporation with:



Propagation event with High School students at Billabong Aboriginal Corporation December 2007

ACT LAND KEEPERS – SUMMARY OF PROJECT ACHIEVEMENTS

Nursery supplies and equipment (benches, pots, trays, potting mix and native seed)

Training and technical information to staff and volunteers

Nursery design and setup plan.

Coordination of two propagation events with local High Schools to provide initial plant stock

ACT LAND KEEPERS – SUMMARY OF PROJECT ACHIEVEMENTS

ATTACHMENT 1 Example of a typical species list for a revegetation works.



OrderID	GA Project	Order Date
37	Site ID 2796, ACT Land Keepers - VegLink	28/08/2006 Father's Day Planting
Species	No of Plants	Provenance
Bracteantha sp. Badga GA MSS C	80	Mt. Majura NR GA MSS C 5/8 0026
Bulbine bulbosa GA MSS C 5/8 0029	120	Mt. Ainslie NR GA MSS C 5/8 0029
Wahlenbergia communis GA MSS C	50	Black Mt. NR GA MSS C 5/8 0416
Poa labillardieri	280	
Austrodanthonia (Danthonia) GA	80	Aranda Bushland NR GA MSS 4 5/8 0017
Austrodanthonia (Danthonia) GA	80	Kama GA MSS 4 5/8 0018
Dichelachne crinata GA MSS D 5/8	80	Kama GA MSS D 5/8 0060
Leptorhynchos squamatus GA MSS	200	Black Mt. NR GA MSS C 5/8 0088
Poa sieberiana GA MSS D 5/8 0094	40	O'Connor GA MSS D 5/8 0094
Acacia genistifolia	40	
Bursaria spinosa subsp.	20	
Acacia rubida	60	
Acacia implexa	80	
Hardenbergia violacea	20	
Eucalyptus blakelyi	100	
Eucalyptus mannifera	20	
Eucalyptus melliodora	100	
Eucalyptus polyanthemos	60	
Eucalyptus rossii	20	
Dodonaea cuneata	80	
Bracteantha sp. Badga	70	
Indigofera australis	40	Farrer Ridge
Total	1720	

ATTACHMENT 2 Publications and Media articles

The following are examples of media materials funded and co-funded through the ACT Land Keepers Program:



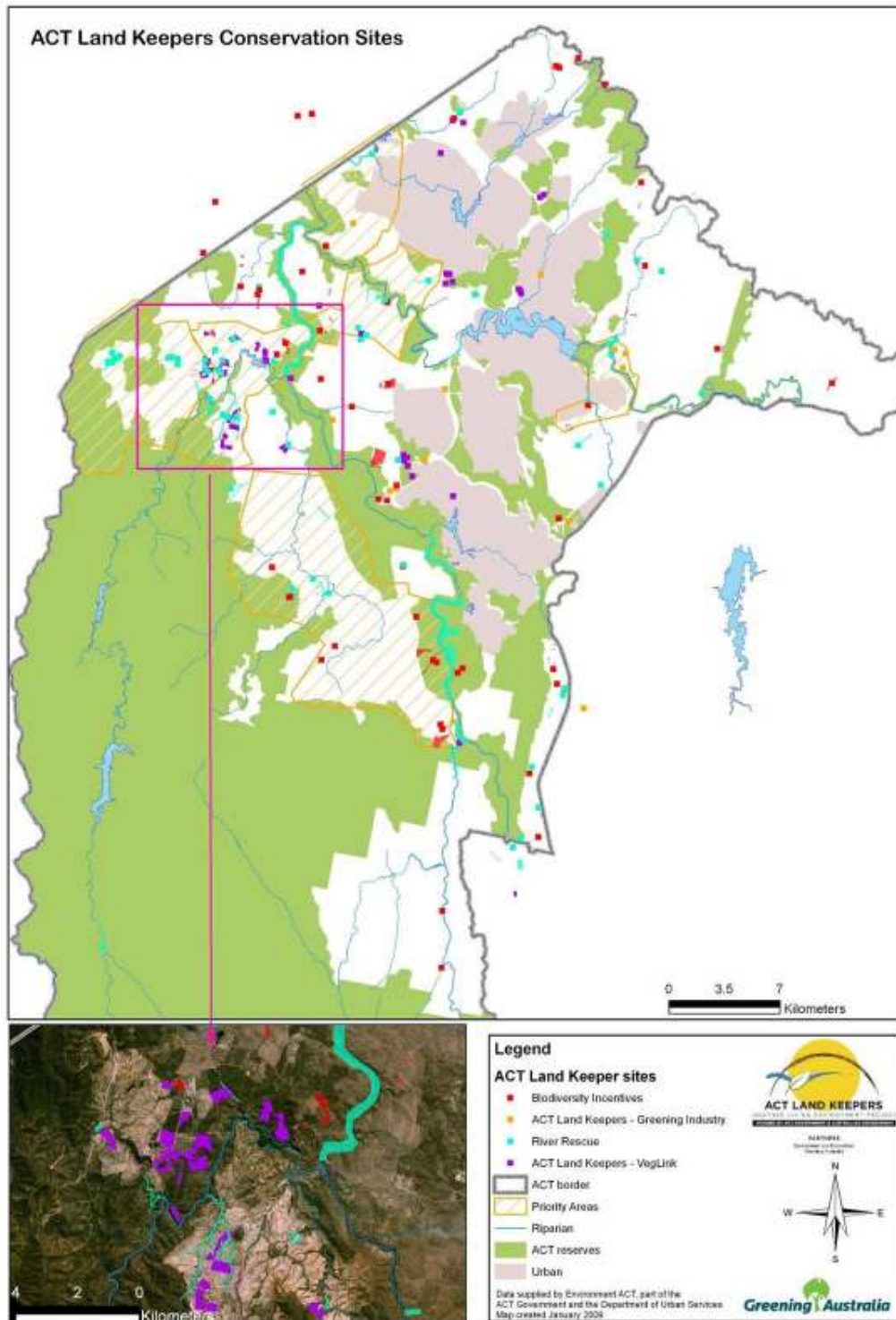
The following is a list of media articles:

1. Butz, M (2005) 'Curious controversy on Cotter renewal', The Canberra Times
2. Robinson, J (2005) 'First priority for Cotter catchment should be trees', The Canberra Times, 4 March, p. 10.
3. Bartlett, T (2005) 'Catchment revegetation in line with recommendations', The Canberra Times, 7 March.
4. Warden, I (2005) 'Pulling together to stop weeds taking hold', The Canberra Times, 21 March.
5. Jean, D (2005) 'Volunteers take root in quest for new shrubbery', The Canberra Times, 23 May, p. 2.
6. Editorial (2005) 'Tree planters to converge on Mt McDonald', The Chronicle, 31 May, p. 14
7. Baggoley, P (2005) 'Race to fill dry, open space', The Canberra Times.
8. Mills, I (2005) 'Going green', Canberra Sunday Times, 31 July, p. 16.
9. Houston, B (2005) 'Planters bring life to mountain', The Canberra Times, 1 August
10. Moss, K (2005) 'Digging in for National Tree Day', City News, 4 August.
11. Taws N & Bond S (2005) 'Bringing back the birds: exciting studies and programs using revegetation', The Chronicle, 30 August, p. 45.
12. 'Greening Australia: volunteer for birds', The Canberra Times, 2 September, p. 27.

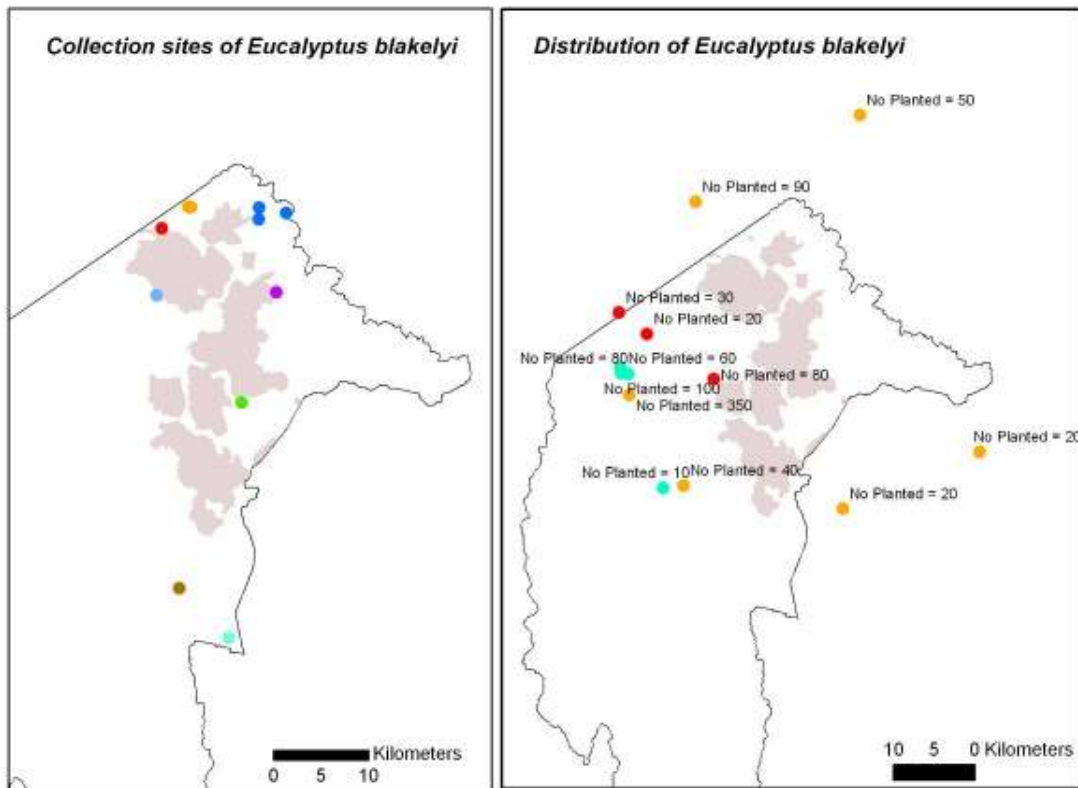
ACT LAND KEEPERS – SUMMARY OF PROJECT ACHIEVEMENTS

13. Editorial (2005) 'Replanting the panorama', Capital, 24 August, p. 8.
14. Editorial (2005) 'Growing in the gardens', City News, 24 November, p. 6.
15. Editorial (2006) 'Volunteers push on replanting', City News, 16 March.
16. Moss, K (2006) 'Susie's growing a green tomorrow', City News, 23 March.
17. Tinkler, E (2006) 'Visiting youngsters show their true spirit with a helping hand', The Canberra Times, 17 April, p. 8.
18. Moss, K (2006) 'New life for lost mums', City News, 4 May.
19. Editorial (2006) '1500 Cotter plantings', The Canberra Times, 1 May, p. 6.
20. Editorial (2006) 'Tree planting activity to remember mums', The Chronicle, 9 May, p. 13.
21. Malone, P (2006) 'Post-bushfire plantings are beating the drought', The Canberra Times, 5 June, p. 6.
22. Moss, K (2006) 'Canberra's Earth mother rewarded', City News, 25 May.
23. Editorial (2006) 'You could volunteer to be a keeper of the land', The Chronicle, 29 August, p. 47.
24. Editorial (2006) 'Narrabundah goes green for Father's Day', City News, 7 September, p. 12.
25. Editorial (2006) 'Green thumb has notched up 50,000 trees', The Canberra Times, 16 November.
26. Editorial (2006) 'Keeping our capital green', The Chronicle, 28 November, p. 16.
27. Editorial (2007) 'Planting 5000 new trees and shrubs', The Chronicle, 17 July, p. 21.
28. Editorial (2007) '5000 trees to plant', Queanbeyan Age, 27 July, p. 17.
29. Malone, P (2007) 'Tree-planting becomes a family affair', The Canberra Times, 30 July, p. 4.
30. Davies, T (2008) 'Greening's big goals', City News, 3 April, p. 6.
31. Sherlock, E (2008) 'Help needed to make the Cotter green' Canberra Sunday Times, 30 March.
32. Editorial (2008) 'Great green challenge', City News, 22 May, p. 11.
33. (2008) 'Rising from the ashes' in Making a Difference: A Celebration of Landcare, DAFF, Canberra, p. 29.

ATTACHMENT 3 ACT Land Keepers Conservation Sites



ATTACHMENT 4B Example of native seed collection and distribution sites



Data recorded on Seeds for Survival Database

Seedlot details Greening Australia Capital Region

Seed details	Id specimen: <input checked="" type="checkbox"/>	Adequate details: <input type="checkbox"/>	Seedlot no: <input type="text"/>
Botanical name: <input type="text"/>	Project: <input type="text"/>	Date(s) of harvest: <input type="text"/>	Storage: <input type="text"/>
Propagate type: <input type="text"/>	Accession no: <input type="text"/>	Seedlot quality: <input type="text"/>	Clearness (%): <input type="text"/>
Storage container: <input type="text"/>	Initial quantity (kg): <input type="text"/>	Purpose of collection: <input type="text"/>	Cost of seed per gram: <input type="text"/>
<input type="button" value="Collector"/> <input type="button" value="Locality"/> <input type="button" value="Treatment"/> <input type="button" value="Germination"/> <input type="button" value="Withdrawal"/> <input type="button" value="Notes"/>			

Collector

Collector:

Seedbank % commission fee: Commission payable on sale:

Collection hours: Clearing hours: Custom bag size:

Owner:

Location

Site ID for Vegetation Survey List:

Location/town:

Locality description:

Latitude: Longitude: Altitude: AMO calculator

Provenance:

Eastings: Northings:

Record: of (1 filtered)

Legend

Provenance

- Mt Mugga Mugga
- Hall
- Gigerline NR
- Hackett

Urban



Data supplied by Environment ACT, part of the ACT Government and the Department of Urban Services November 2008

END