

The Regenesis Toolkit

Your guide to establishing locally
native mixed species carbon forests
in urban and rural environments



The background of the page is a lush, green photograph of various plants. On the left side, there are large, bright green leaves, some of which are slightly out of focus. In the center, a single, long, white, tubular flower hangs vertically. The rest of the background is filled with dense, smaller green leaves and stems, creating a textured, natural setting.

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Message from our Mayors

We are very proud to introduce The Regenesis Toolkit: Your guide to establishing locally native mixed species carbon forests in urban and rural environments. The Regenesis model plants locally native trees, shrubs and grasses to enhance biodiversity, sequester carbon and enable the trading of carbon offset certificates.

Regenesis was a partnership project of Blacktown City Council and sister city, Liverpool Plains Shire Council, made possible through a three-year, \$2 million grant from the NSW Environmental Trust. The grant funded period concluded on 31 December 2010, but the Regenesis model continues with additional on-ground planting and community engagement along with the Regenesis Forest Registry which facilitates carbon accounting and trading.

During the grant-funded period, Regenesis planted more than 222,000 native plants across 100 hectares of land in 33 carbon forests. In order to do this, Regenesis engaged with businesses, land managers and agencies such as Catchment Management Authorities, as well as suburban and rural community members and organisations. Ten of the resulting forests are privately owned, 21 are Council owned, and two are on Crown land.

We are so pleased with the outcomes of Regenesis that we decided to produce this Toolkit to guide ongoing delivery of the project within our communities and to make this guidance available for other organisations and individuals interested in undertaking similar projects.

We urge you to consider implementing any or all aspects of the Regenesis model with your communities in your area.

Councillor Alan Pendleton
Mayor
Blacktown City

Councillor Ian Lobsey
Mayor
Liverpool Plains Shire

Regenesis engages with communities and businesses in order to plant locally native trees, shrubs and grasses to enhance biodiversity, sequester carbon and enable the trading of carbon offset certificates through carbon emissions trading schemes.

Regenesis is not a carbon emissions trading scheme. Rather, it is a model for planning and planting locally native reforestation projects that create additional revenue for landholders to establish and maintain native vegetation. The Regenesis model provides a do it yourself Toolkit to enable the landowners, including councils, crown land managers and private landowners to participate in carbon emissions trading schemes, if they wish to do so.

Benefits for biodiversity and the local environment

Depending on the site location, Regenesis can provide local environmental benefits, including erosion control, improved soil quality and creek health, reduced soil salinity, creation of windbreaks, shelter for grazing stock as well as enhanced biodiversity through increased habitat.

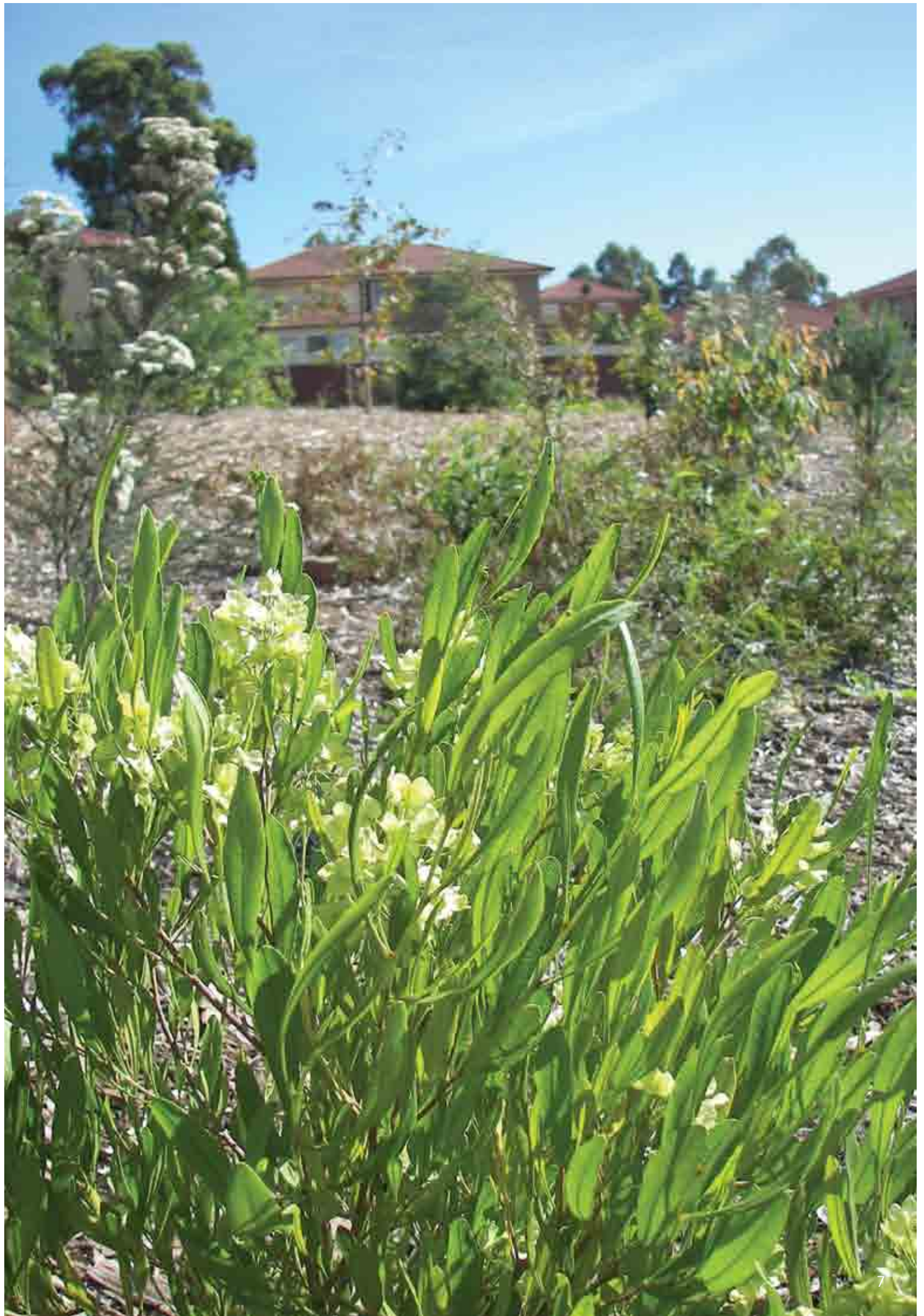
Carbon trading – it's happening now

In addition to the local environmental benefits, forests are natural storage places for carbon, helping to balance the levels of carbon in the atmosphere. Trees take in carbon dioxide from the atmosphere as part of photosynthesis and store carbon in their roots, trunks, branches and leaves.

Science-based techniques enable us to measure the amounts of carbon stored or 'sequestered'. Carbon emissions trading schemes often include a system of financial reward to those who grow forests that comply with specific requirements set out by the internationally accepted Kyoto Protocol.

In 2008, across the world, the carbon emissions trading schemes and markets combined to form an industry worth more than US \$118 million¹. Carbon certificates generated through reforestation projects are currently being sold by Australian landowners through the voluntary carbon market. Those buying carbon certificates are often willing to pay higher prices where certificates are generated from forests providing biodiversity benefits, like those provided by Regenesis. Extension of wildlife habitat is particularly attractive to buyers. Buyers in the voluntary carbon market purchase carbon certificates to offset their carbon emissions because they wish to, not because it is mandatory. For instance, people are participating in the voluntary carbon market when they buy carbon certificates or 'offsets' to make up for the carbon emitted from an airline trip or for running a car.

¹Hamilton, K., Sjardin, M., Shapiro, A. & Marcello, T., *Fortifying the Foundation: State of the Voluntary Carbon Markets 2009*. Ecosystem Marketplace & New Carbon Finance, p ii.







Regenesis... the beginnings

In 2006, the NSW Environmental Trust's (the Trust) Urban Sustainability Program provided the opportunity for Blacktown City Council (BCC) to partner with sister city Liverpool Plains Shire Council (LPSC) on a tangible project and add to its existing revegetation program to create locally native forests suitable for carbon trading. This primary partnership provided a larger potential pool of land for planting, enabled additional partnerships with private landowners and allowed the funding and learnings to be shared between urban and rural areas.

The Regenesis project had seven objectives

- 1 Attract project stakeholders and sponsors interested in sustainability outcomes
- 2 Develop carbon based biodiversity strategies for both Councils
- 3 Engage communities and individuals in hands on plantings
- 4 Offer carbon management options to the general community
- 5 Sequester carbon through plantings in Blacktown City and Liverpool Plains Shire
- 6 Add value by building strong links to existing and potential Council programs
- 7 Establish a carbon pool yielding long-term income in both Council areas.

Regenesis, BCC and LPSC, negotiated a Memorandum of Understanding (MOU) which outlined the financial commitments from each, administrative and reporting arrangements, responsibilities and communication protocols. Regenesis had three full-time grant funded staff: a Project Leader and Project Officer based in BCC and another Project Officer based in LPSC, each employed by their respective Councils, under the normal employment conditions of that Council.

While BCC was the lead partner and held most financial responsibility, regular meetings and communication between the two partner Councils ensured the project adopted a collaborative process.

Engaging our communities

Our communities were, and continue to be, integral to Regenesis. The carbon forests were largely planted by local residents and will remain within the communities for generations to come. Effective community engagement was essential to the project. The following activities were the most successful in encouraging individuals, organisations and businesses to partner with Regenesis.

Widely promoted Community Tree Planting Events on Regenesis sites throughout Blacktown City were attended by up to as many as 200 individuals per event. When requested, additional events were arranged for interested religious, community, school and business groups. To avoid water use over hot summer months, planting occurred only from March to October. In total, Regenesis hosted 99 planting events, with more than 11,000 members of our communities being actively involved through these planting events and other community engagement programs run by Regenesis. An annual Blacktown City Council Environmental Sustainability Calendar was created to promote the Regenesis events along with Council's other community-based environmental sustainability programs, facilitating coordination between Council sections and cross-promotion of activities.

In Liverpool Plains Shire, a phone survey and landowner forums identified landowners who were interested in planting with Regenesis. Ten landowners partnered with Regenesis to plant locally native carbon forests on their land. Based on the 'Bridges to Boorowa' program², the Regenesis weekend trip of 17 Blacktown City Bushcare volunteers to plant in the Liverpool Plains Shire supported the landowners Lindsay and Carolyn Bridge to achieve ambitious planting goals and enhanced understanding between the volunteers and locals.

Partnerships with agencies, including Namoi CMA and ongoing involvement by Quirindi High were pivotal to successful community engagement in Liverpool Plains. Conservation Volunteers Australia (CVA) and Department of Juvenile Justice continue to provide site preparation, planting and maintenance for Regenesis forests throughout Blacktown whilst providing valuable skill enhancement and experience for participants.

Presentations to community and education groups promoted the events and covered topics relevant to the audiences at the time, including climate change, carbon sequestration, carbon trading and biodiversity. Community event stalls with quick, easy competitions and prizes of native plant tubestock, promoted the planting activities and raised awareness about climate change and biodiversity.

²North Sydney Council 2009, *Guidelines for rural and urban partners to carry out volunteer tree planting projects in rural areas*. See www.northsydney.nsw.gov.au/www/html/6406-building-bridges-to-boorowa-in-2009.asp





“It’s awesome. I like planting the trees. We do that cos it helps nature. I love digging the holes. The other people in our Bushcare Group help me when I ask. It is good teamwork. When I grow up, I want to be a gardener.”

Jamison, 12 years of age, talking about his role as one of the first seven members of the new Tregear Reserve Bushcare Group, established October 2008 as a result of the first ‘Regenesis & Try Bushcare’ planting day.



Lindsay Bridge, Liverpool
Plains Shire private land
owner and Regenesis partner



Selecting sites for carbon forests

Enhancing biodiversity and local environment outcomes

For the purposes of carbon trading, there is no requirement to use native species. However the Regenesi objective to enhance biodiversity intrinsically required the planting of locally native species, in ways that also met the requirements of carbon trading. Regenesi adopted various means to assess and select planting sites.

The Regenesi project developed Biodiversity Strategies for BCC and LPSC to inform and guide local development policy, biodiversity enhancement and to assist in locating all proposed Regenesi plantings. To help strengthen and enhance biodiversity, Regenesi favoured sites that extended wildlife corridors and provided buffer zones for remnant bushland and previous revegetation work. Local CMAs, land managers and landowners assisted Regenesi to identify suitable sites that complemented the objectives of Catchment Action Plans and other strategic plans. In Liverpool Plains Shire, Namoi CMA partnered with Regenesi and the individual landowners to help in the site selection for local environmental benefits and to offer specialist local knowledge.

Complying with carbon trading requirements

Regenesi was initially conceived to work within the NSW Greenhouse Gas Abatement Scheme (GGAS), and being implemented when the national Carbon Pollution Reduction Scheme (CPRS) was scheduled for commencement in 2009/10. Regenesi was designed to meet the requirements of both schemes – requirements based on the Kyoto Protocol and the minimum values for the definition of a forest used in Australia's National Carbon Accounting System (NCAS).

To comply, potential planting sites must:

- Have been predominantly non-forested (i.e. with a canopy cover of less than 20% of the site) at 31 December 1989
- Have been reforested through human inducement on or after 1 January 1990
- Be at least 0.2 hectares (2,000 m²) in area
- Be at least 10 metres in width.

To comply, the reforestation work must:

- Have a dominant tree species with a potential height of at least 2 metres at maturity
- Result in a canopy cover of at least 20% of the forested site.

GGAS requires the landowner to register the carbon forest on the land title in the form of a legal instrument. Through legal advice, Regenesi developed such a legal instrument, a Deed of Carbon Sequestration Rights, which formalises the commitment of a landowner, whether public or private, to maintain a specified site as a carbon forest. This Deed shows the location of the carbon forest on the land, specifies ownership of the Carbon Sequestration Rights (i.e. who will receive the income from carbon trading), outlines the land management requirements, registers the forestry right and notes the term for which the carbon forest is to be retained on this site. GGAS requires a term of 100 years. Given indications from the draft national CPRS and the Federal Government's Carbon Farming Initiative Discussion Paper, it is expected that a national carbon emissions trading scheme would also require the carbon forest to be retained for 100 years. Once signed by a landowner, this Deed is registered with NSW Land and Property Management Authority (LPMA) on the relevant land title. In the Regenesi model, the land owner also owns the Carbon Sequestration Rights, but this model is flexible enough to allow for landowners that may wish to pass on these rights to another party.

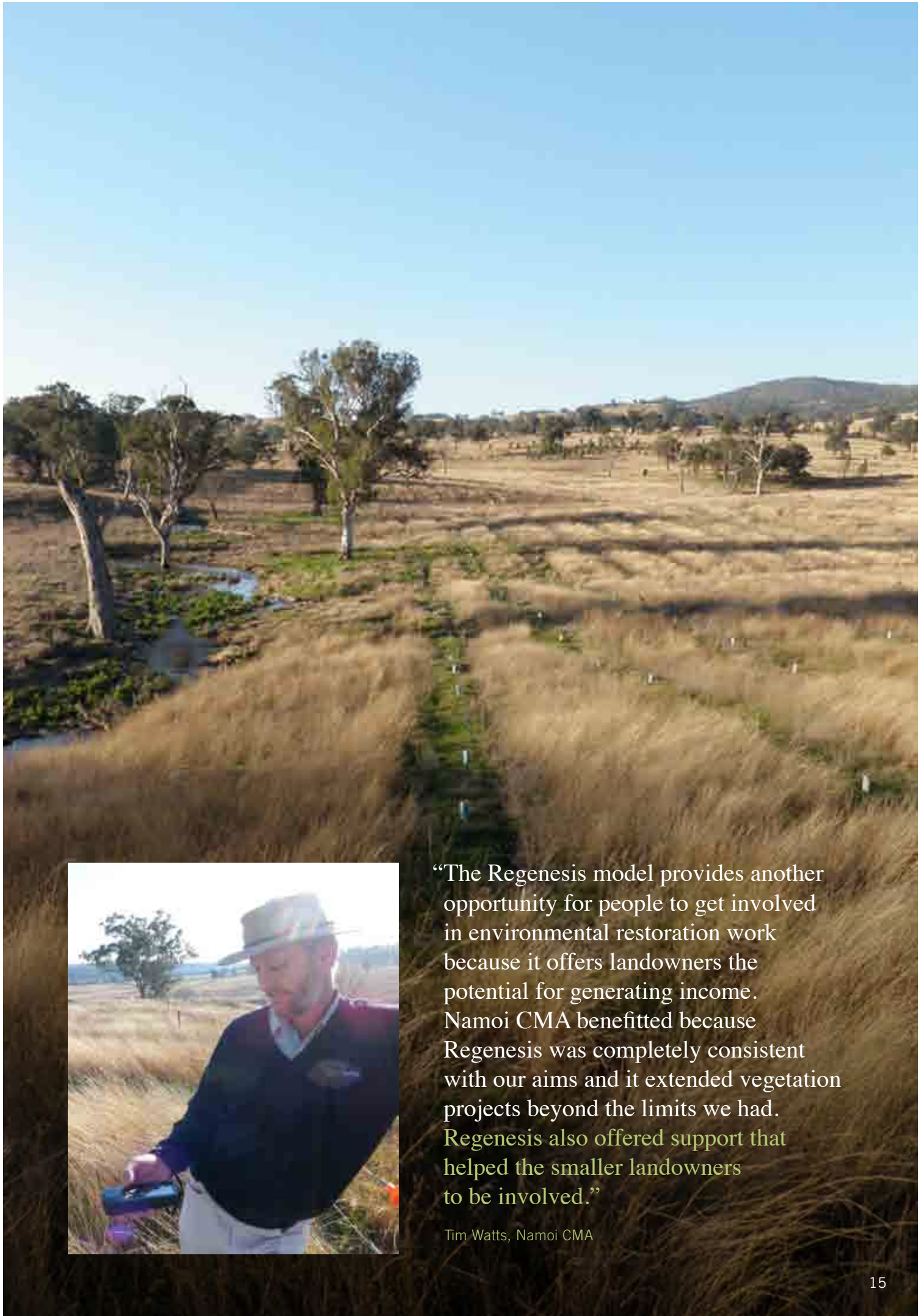
As Regenesi carbon forests are selected and planted to meet all of these requirements, the Regenesi model can credibly participate in a range of existing and proposed carbon emissions trading schemes and mechanisms.

Additional criteria to be considered

When a carbon forest site is proposed, existing and future plans for the site need to be considered along with potential impacts on the neighbouring community, to ensure that no conflicting land use will have a negative impact upon the proposal and vice versa. These considerations include existing and proposed Plans of Management, community safety, bushfire-related regulations and current and future use of the site. The Regenesi Carbon Forest Criteria was developed to ensure that all such issues were considered when planning urban and rural carbon forests.

In order to test the Regenesi model on as many land site and ownership types as possible, Regenesi called for Expressions of Interest (EOI) from private landowners wishing to plant Regenesi forests on their land. This was undertaken in the Liverpool Plains Shire where landowners were more likely to have larger parcels of land. To ensure project compliance and enable clear evaluation of the EOIs, Regenesi also developed a process and tool known as the Project Compliance and Evaluation Form.

See the Regenesi Toolkit CD (inside back cover) for the Regenesi Carbon Forest Criteria, the rural Project Compliance and Evaluation Form and the Carbon Sequestration Right Deed required to register the carbon forest on the land title.



“The Regenesi model provides another opportunity for people to get involved in environmental restoration work because it offers landowners the potential for generating income. Namoi CMA benefitted because Regenesi was completely consistent with our aims and it extended vegetation projects beyond the limits we had. Regenesi also offered support that helped the smaller landowners to be involved.”

Tim Watts, Namoi CMA

Planting our 100 year biodiversity-based carbon forests

Revegetation of our land with locally native species is a key objective of many Councils and CMAs. For this reason, with consideration of the Regenesis Carbon Forest Criteria, Regenesis can be easily adopted and integrated into core business and general operations. Similarly, Regenesis can be easily adopted by rural landowners wishing to plant to control soil erosion, create windbreaks, shelter stock or improve wildlife habitat.

All plantings in Blacktown consist of Cumberland Plain Woodland species, the Critically Endangered Ecological Community of the Blacktown City area. On the Liverpool Plains, Regenesis planted species from the Endangered Ecological Community of White Box Grassy Woodland which was prevalent prior to European settlement.

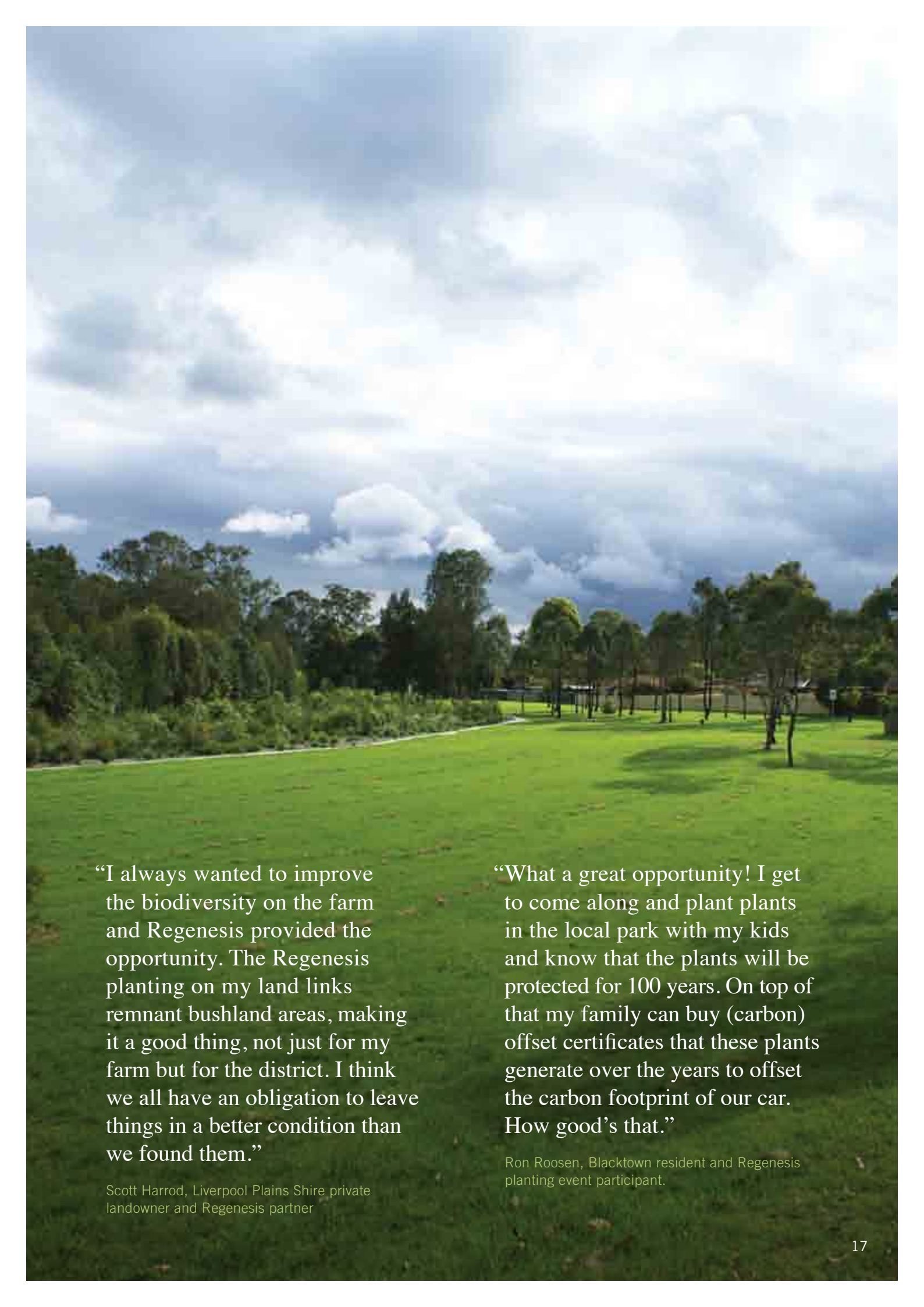
All Regenesis plantings were by hand, using tubestock from seed collected and plants propagated locally. Tubestock was used, rather than seed, to maximise survival rates.

In Blacktown City, Regenesis undertook a Request for Quotation process to engage revegetation contractors to undertake site preparation and planting works. These contracted planting works supplemented the planting undertaken by our local community.

In order to supplement the planting works undertaken by the local community in the Liverpool Plains Shire, an EOI was called to establish a panel of suitably qualified contractors and suppliers who could assist in the establishment of our rural carbon forests. Contractors undertook the revegetation of 'Fairfield', the Council owned property adjacent to Quipolly Dam. Private landowners were in control of their planting projects on their properties, and mainly undertook the planting themselves, using the services of the panel members where required. Regenesis supported the private landowners with advice and technical assistance.

In total, over 222,000 native plants were planted by Regenesis with our communities. The forests that result will be retained for a minimum of 100 years for the enjoyment and benefit of our communities and environment.





“I always wanted to improve the biodiversity on the farm and Regensis provided the opportunity. The Regensis planting on my land links remnant bushland areas, making it a good thing, not just for my farm but for the district. I think we all have an obligation to leave things in a better condition than we found them.”

Scott Harrod, Liverpool Plains Shire private landowner and Regensis partner

“What a great opportunity! I get to come along and plant plants in the local park with my kids and know that the plants will be protected for 100 years. On top of that my family can buy (carbon) offset certificates that these plants generate over the years to offset the carbon footprint of our car. How good’s that.”

Ron Roosen, Blacktown resident and Regensis planting event participant.

Before and after

Duncan Park, Seven Hills, Blacktown City



Site prior to establishment of bio-diverse carbon forest



Planting works undertaken by our Blacktown community

18 month old forest provides buffer to remnant vegetation along Blacktown Creek



Mapping our potential for future forests

Blacktown City



0 2.5 5 7.5 10 km

● Indicates a Regenesis bio-diverse carbon forest

■ Indicates areas of vegetation that existed on 31 December 1989. These areas of remnant bushland have biodiversity and conservation value. However, they are not eligible as reforestation sites under Kyoto Protocol requirements as they were not clear of forest on 31 December 1989

□ Indicates areas that were clear of vegetation on 31 December 1989. These areas have the potential to meet the requirements for bio-diverse carbon forests. Some of the areas will not be appropriate for the planting of these forests, due to their current use, such as agriculture and recreation. Onsite inspections are required to ensure they comply with additional criteria as identified in the Regenesis Carbon Forest Criteria

See the Regenesis Toolkit CD (inside back cover) for the Regenesis Carbon Forest Criteria and for Biodiversity Strategy 2010-2020: Blacktown Local Government Area, especially Carbon Sequestration (Australian Kyoto Protocol Compliant) Land on pages 54-57 and Appendix G: Carbon mapping criteria on pages 128-145.

Mapping and analysis undertaken by Eco Logical Australia as part of Biodiversity Strategy consultancy.

Liverpool Plains Shire





The way into the carbon market with Regenesi

In carbon emissions trading schemes that include reforestation as a means of generating carbon certificates, one carbon certificate is issued for each tonne of carbon sequestered (or stored) in the forest. Certificates can be used to offset the emissions of the certificates' owner, or sold to someone else who wishes to offset their carbon emissions.

Each certificate is then 'retired' or 'surrendered', so that it cannot be sold again. In this way, a certificate can be used only once to offset a tonne of carbon. Australia's recognised system for measuring carbon stored in forests is the National Carbon Accounting Scheme (NCAS), administered by the Federal Department of Climate Change and Energy Efficiency.

Regenesi is flexible enough to operate in current and future markets

In addition to meeting the relevant requirements of the Kyoto Protocol and Australian carbon reforestation standards, the Regenesi model is flexible enough to enable landowners to participate in a range of carbon-related schemes and mechanisms.

These include:

- NSW Greenhouse Gas Abatement Scheme (renamed Greenhouse Gas Reduction Scheme)
- National Carbon Offsetting Standard (NCOS)
- Carbon Farming Initiative
- Voluntary Carbon Standard.

However, as scheme rules can change, landowners need to gain expert advice or themselves check that their planting project complies with the relevant scheme at the time they wish to register. Regenesi can assist with this.

The Regenesi Forest Registry – landowners in control

In the development of the Regenesi model, it was important to ensure that control remained with the landowner: control to plan and establish the carbon forest, control to retain the Carbon Sequestration Rights, control to determine if and when the carbon certificates are traded.

Using a Request for Quotation process, Regenesi selected a carbon advisor and broker, Australian Carbon Traders Pty Ltd, which, in addition to meeting other criteria, had developed a landowner – controlled system, now adapted for use by Regenesi. The Regenesi Forest Registry is an online system that facilitates carbon accounting and the advertising and trade of carbon certificates for Regenesi forests.

We invite interested landowners with compliant carbon forests to join us in the Regenesi Forest Registry. Australian Carbon Traders Pty Ltd is available to provide participating landowners with guidance and assistance for all steps in the carbon trading process. By joining us in the Regenesi Forest Registry, your carbon forests can help you generate an income.

“At first I thought there was all this complex legal stuff. But once it was explained to us it was easy to understand. It's a wonderful grassroots project. We really enjoyed the weekend when the city people came up. The mixing of city and rural people was great. It's been a great experience for the family to make this real environmental investment on our land. We'll make money out of it too, I don't deny that, but the other benefits have been very worthwhile.

Carolyn Bridge, Liverpool Plains Shire private landowner and Regenesi partner

Do you want to know more, or join us in the Regenesi Forest Registry?

Go to
www.australiancarbontraders.com/regenesi





You are welcome to join us.

The Regenesi model, including the Regenesi Forest Registry, allows a clear pathway to carbon trading for landowners considering on-ground reforestation work, whether they are Councils, State government land managers, CMAs or private owners.

For more information about the Regenesi grant-funded project including the Regenesi Forest Registry and to learn how to join.

Email ourenvironment@blacktown.nsw.gov.au
Go to www.australiancarbontraders.com/regenesi

See the documents in the Regenesi Toolkit CD (inside back cover).



Using this Toolkit

Regenesis represents a substantial investment by NSW Government, Blacktown City Council and Liverpool Plains Shire Council. The result is a reforestation and carbon offset model flexible enough to operate in both voluntary and mandated carbon markets, and is adaptable for rural and urban areas.

The Regenesis Toolkit will be of most interest to urban and rural Councils, State Government land managers, Catchment Management Authorities (CMAs), landcare groups and private landowners, in essence, any landowner who is looking to establish native revegetation areas and generate an income from them.

The Regenesis CD provided with this booklet includes detailed documents to support every section of the booklet. For those wishing to undertake projects similar to Regenesis, these detailed strategy documents, practical checklists and templates can be adapted to help you to turn your project objectives into on-site action. Readers are free to adapt and use the entire model or select the aspects appropriate to them. However, please note the following Terms of use.

Terms of Use

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Regenesis uses
**National Carbon
Offset Standard**
Tudor RP 100% Recycled
Carbon Neutral paper

An Australian Government Initiative