

30-year woodland trial underway at Monarto

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A pioneering long-term University of Adelaide experiment to see how best to restore overgrazed land back to native woodland gets underway at Monarto Zoo today.

The University of Adelaide, working with Zoos South Australia (Zoos SA) and other partners, is planting 10 hectares of once-farmed land with a range of native [species](#) at different planting densities.

"We need to start restoring woodland areas of the Mount Lofty Ranges," says Project Leader Professor Corey Bradshaw, from the University's Environment Institute.

"Across Australia we've lost 40% of our [forest cover](#), but in the Mount Lofty Ranges we've lost 90% and the fragments that are left are so small that they don't provide adequate habitats for native fauna. We've already lost about 130 species of [plants and animals](#) and there are major extinctions to come.

"What we are asking is how many different species – and in what densities – are required to restore a native woodland from an over-grazed paddock, to provide the biggest long-term biodiversity and carbon benefits simultaneously for the lowest cost."

Professor Bradshaw said the new carbon economy should provide opportunities for better land management and restoration.

"But we can't just put things in the ground hoping they'll restore forests

and sequester carbon. We need [experimental evidence](#) to show how we can do it successfully for the lowest cost."

The experiment is an Australian Research Council Linkage Project led by the University of Adelaide, with partners including Zoos SA and the University of Queensland.

"Zoos SA is committed to restoring and expanding natural habitat at Monarto Zoo to represent what used to exist in the region, before clearing for agriculture and the introduction of [pest species](#)," says Zoos SA Australian Conservation Manager Dr Phillip Ainsley.

"We want to understand what produces the best carbon production outcomes and biodiversity responses and do this in the best and most cost effective way possible."

The plantings will be based around the Mallee box gum, South Australian blue gum and various shrubby species. Survival and growth rates will be monitored along with the presence of native fauna – invertebrates, reptiles and eventually birds.

Professor Bradshaw said it would be 30 years before definitive conclusions were drawn. "But we'll have early results from different growth rates and survival," he says. "We need to start somewhere. We can wipe out an ecosystem in one afternoon with a bulldozer, but re-establishing it takes a long time."

Provided by University of Adelaide

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