

Habitat 141 - Biodiverse Carbon Sink at Nurcoun, Victoria

Habitat 141 is a 50 year vision to restore and reconnect the iconic landscapes that straddle the South Australian and Victorian borders and extend far up into the NSW rangelands, stretching some 700 km along the 141st meridian of longitude. The project aims to link patches of indigenous vegetation in the Murray –Sunset National Park through the Big Desert Wilderness and Wyperfeld National Park to the Little Desert National Park, the Grampians and Lower Glenelg National Park.



Wimmera River, Little Desert National Park

Environmental need: Connecting these landscapes provides critical links for species migration within the region by reconnecting remnant vegetation with the large reserve systems of the region. Habitat 141 aims to restore functional ecosystems. Habitat 141 has been listed as one of six initial Wildlife Corridors proposed to be recognised by an act of parliament in the recently released Draft National Wildlife Corridors Plan

Greening Australia’s large-scale landscape restoration approach mitigates the impact of climate change on biodiversity through prevention and adaption:

- Carbon sequestration helps reduce negative climate change impacts
- building ecosystem resilience through the creation of wildlife corridors facilitates species adaption to climatic changes

Community relevance: Restoring these iconic landscapes along the border means working with private landholders, Parks Victoria, Victoria Naturally Alliance, Landcare groups, the local Indigenous people and a variety of other community stakeholders to achieve the vision.

NURCOUNG – A BIODIVERSE CARBON SINK

In 2008, Greening Australia purchased a property at Nurcung, approximately 400km NW of Melbourne in Western Victoria. This 180 hectare property was purchased with the purpose of undertaking high quality biodiverse restoration providing multiple environmental outcomes whilst also generating carbon credits through the then voluntary market.

A strategic location

This property was selected as it was identified as a strategic link creating a corridor which would re-connect isolated landscapes and species within the Habitat 141 vision. The Mt Arapiles-Toosan reserve complex encompasses 5,904 ha of protected areas including the Mitre and Nurcung flora reserves and the Arapiles – Toosan State Park reserve. Reestablishing a vegetated corridor between the Mt Arapiles-Toosan reserve complex with The Little Desert National Park reconnects over 138,851 ha of protected vegetation.



Habitat benefits

A large number of common flora and fauna species are found within both reserves including some threatened species. The property falls within the preferred range of the nationally endangered Red-tailed Black-cockatoo and contains its main food plants– Bulokes and Desert Stringy Bark. Mallee Fowl and Bush Stone-Curlews, considered endangered in Victoria, have been observed within both nearby reserves. The nationally vulnerable Hairy Pod Wattle and the nationally endangered Wimmera Spider Orchid have been recorded in the nearby reserve systems.

Malleefowl Monitoring

Greening Australia is working with the Victorian Malleefowl Recovery Group and Conservation Volunteers International to monitor populations and collect data on the current populations both North and South of the Nurcung Link. We are also working with local landholders to collect malleefowl feathers off private land. The feathers are then sent to Latrobe University for DNA analysis which provides critical information on malleefowl populations. Monitoring efforts have discovered five previously unknown active mounds, which presumably indicates five more breeding pairs of malleefowl, thanks to this link.



Malleefowl mound (H141)

Biodiverse revegetation

Immediately following purchase, Greening Australia developed a restoration plan for the property, specifying a revegetation program for 130 ha (the balance was regenerating bush), guided by our 'Biodiverse Carbon Standard'

There are 3 ecological vegetation classes (EVCs) represented on the property and direct seeding combined with hand planting was used to restore the native plants that are represented in these EVC's

These were :

1. Shallow Sands Woodland:
 - 9 planted species
 - 21 direct seeded
2. Sandstone Shrub Woodland Sandstone Ridge:
 - 14 planted species
 - 23 direct seeded
3. Heathy Woodland:
 - 10 Planted species
 - 24 direct seeded

The restoration plan also included a fire management plan, a network of access tracks and firebreaks, and most importantly, a comprehensive rabbit control program prior to and subsequent to establishment

The results

The 130 ha of trees and shrubs are now well established – and the important aspect of our work now is to ensure that we maintain this property free on invasive weeds and pest animals. A key recent activity has been to coordinate a district wide rabbit baiting program, which involved 30 local landholders.

Monitoring of the results has been a fundamental aspect of our plan for the property. This has involved an initial six month monitoring of 43 randomly selected permanent monitoring plots across the property. These 20*12 metre plots will be monitored every six months for establishment, growth, species diversity and groundcover condition.

We have achieved our desired stem density (important for optimum carbon capture as early in the plantations life as possible). Growth rates are very pleasing.

The data we have collected, and will continue to collect, once analysed, will provide a very sound basis for the planning of future such projects