



Eneabba

Vegetation direct transfer

Iluka Resources is involved in an innovative approach to the rehabilitation of native vegetation at its Eneabba mine in Western Australia. The rehabilitation practice of transferring intact topsoil and native vegetation is known as vegetation direct transfer (VDT).

While a typical approach entails disturbance of the area and subsequent seeding and replanting, Iluka's environmental and rehabilitation personnel initiated a proactive approach to assist with the challenges of soil stabilisation, preserving seed resources and propagating hard to establish species (termed recalcitrant species). With this practice, native vegetation and 30–40 cm of the intact topsoil profile is excavated and placed onto a ripped subsoil surface.

Approximately two hectares of kwongan heath vegetation were transferred from the mine path to a prepared area. Translocation occurred in 2012. The diversity of plant species has increased every year since the translocation, as indicated by botanical monitoring. Soil stabilisation, soil quality and ecological niche provision have also greatly improved in comparison to the traditional soil handling methods. Many recalcitrant species have survived translocation and are flourishing in the VDT, including *Mesomelaena pseudostygia* from the Cyperaceae (sedge) family and *Desmodcladus parthenicus* from the Restionaceae (rush) family.



Excavator cut of topsoil and native vegetation

Kwongan

Kwongan is the low health-like vegetation that grows in sandplain country of Western Australia. It is characterised by high botanical diversity and endemism. Eneabba kwongan contains in excess of 800 plant species from nearly 120 genera and over 60 families. Kwongan means 'sandplain' in the indigenous Noongar language.



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The Eneabba mine is located in the Mid West of Western Australia, approximately 150km south of Geraldton. Mineral sands operations have been conducted at Eneabba for over 40 years. Mining idled in April 2013 and rehabilitation is ongoing.



Placement of vegetation and topsoil segments