



CASE STUDIES



Flora Restorer, Eneabba, Western Australia

TRANSFORMING REHABILITATION WITH INNOVATION

Iluka designed and commissioned new equipment for mine site revegetation in 2019. Named Flora Restorer, the tractor-pulled equipment allows a threefold approach to improving the establishment of native plants at our Eneabba mine site:

1. The air-seeder delivers and buries a wide range of sized and shaped seed, essential for the diversity of plants restored in Eneabba revegetation.
2. Land imprinting creates “micro-reservoirs” in the sandy soil surface, which can hold rainwater in a downpour, thereby increasing infiltration and reducing erosion.
3. The soil surface is stabilised by spraying dilute bitumen emulsion that binds the surface for a year or two, holding the seed in place to germinate, stabilising the imprints, and stopping wind erosion of the sandy soil.

The equipment was designed and constructed by a local engineering company, Paragon Industrial. The process of burying seed, land imprinting and stabilising with dilute bitumen emulsion has dramatically improved seed emergence at Eneabba. This improves the efficiency of broadcast seeding, both in the quality of the revegetation and increasing the area that can be revegetated each year, with the same collection of native seed.

The research that led to Flora Restorer’s design and construction was presented in a plenary session at the 13th International Conference on Mine Closure held in Perth in September 2019, and published in the peer-reviewed proceedings⁴.

⁴ Dobrowolski, MP 2019, 'Combining seed burial, land imprinting and an artificial soil crust dramatically increases the emergence of broadcast seed', in AB Fourie & M Tibbett (eds), Proceedings of the 13th International Conference on Mine Closure, Australian Centre for Geomechanics, Perth, pp. 667-678, https://doi.org/10.36487/ACG_rep/1915_53_Dobrowolski