

# Enviro Facts

ENGIE

HAZELWOOD MINE

## What is Landscape Functional Analysis?

Landscape Function Analysis or LFA is a field-based monitoring procedure which uses rapidly assessed, simple visual indicators to assess how well a landscape works as a biophysical system. LFA was developed by David Tongway at the CSIRO and has been applied to mine site rehabilitation across the world. The results of LFA can be used to inform future planning of mine overburden dumping, shaping, stabilising and revegetation methods. Data collected also assists in the tracking of progress of rehabilitated areas both visually and analytically through regular sampling of landscape indices.

Assessment can also take place on undisturbed reference sites and disturbed analogue sites to add further comparative value to the information it provides. LFA provides numeric values of a number of indicators such as the status of soil stability, infiltration of water and the cycling of nutrients. When results are plotted, they can show the rate of change of the landscape indices, allowing predictions to be made as to when these indices will reach a sustainable level.

## Landscape Functional Analysis at Hazelwood

Last year, ENGIE Hazelwood initiated a LFA network which will be progressively established over time. It started with 24 monitoring points across the site but this number will increase as the program matures. These surveys will help compare the results of different areas and methods of rehabilitation, gauge rehabilitation against undisturbed remnants and provide feedback on future rehabilitation requirements.

*Pictured right: LFA transect at ENGIE Hazelwood.*



## 2016 Tree Planting

Each year, ENGIE Hazelwood undertakes an annual tree planting program, planting vegetation in various areas around the Hazelwood site. Since July this year, 2500 trees and large shrubs as well as 500 supporting small vegetation species have been planted at ENGIE's 'Terminal' wetlands and 'Strzelecki Highway Conservation area' as part of the annual program. Work will continue until all the vegetation is planted.

# Enviro Facts



## HAZELWOOD POWER STATION

### Hazelwood Cooling Pond

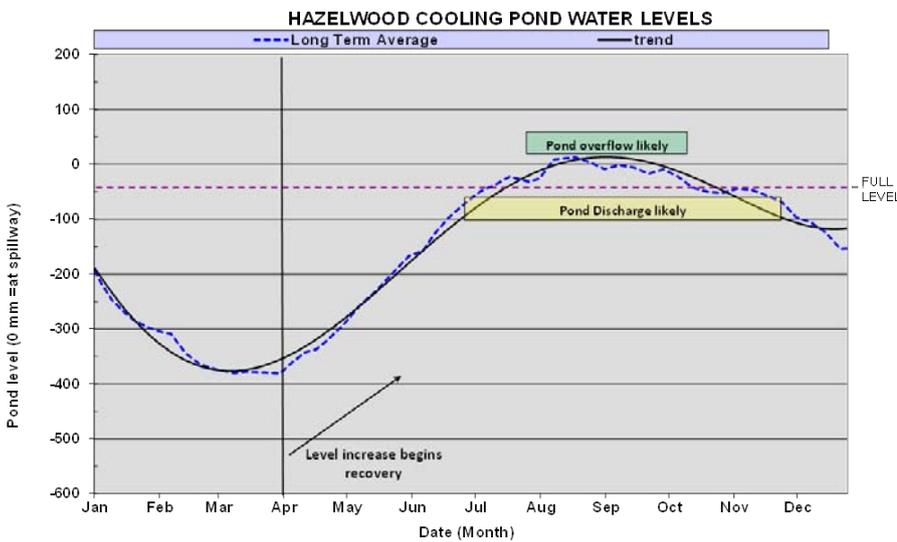
The Hazelwood Cooling Pond was built to cool water from the Power Station Condensers, enabling this water to be recycled through the station.

This results in evaporation losses and a heated lake, which is available for recreational users.

The water lost though evaporation is made up through rainfall, inflow from upstream (Churchill area stormwater),

artesian water from beneath the mine, raw Moondarra water purchased and used by the power station, and stormwater from the mine and power station.

The pondage is 550 hectares in size with a capacity of 31,000 Ml. It is nearly twice the surface area of Lake Narracan but holds over four times the volume. Information on water quality and water level is supplied to Latrobe City on a monthly basis.



### Pondage Water levels

During summer when rainfall is lower and evaporation is higher, the losses are greater than the water make-up volumes from Hazelwood and this is why the water level drops.

Once it drops to 200mm below the spillway, the shallower areas to the eastern side of the main pond become a risk to high speed water craft. This can also affect boat launching facilities, and causes concern for public safety which is why a speed restriction is put in place and managed by Latrobe City.

### Rainfall Summary 1982 to June 2016

