

# Program to establish Tropicana bush fire protocol a win-win for all

/ENVIRONMENT

The Tropicana Joint Venture (TJV) is working with the Department of Fire and Emergency Services (DEFES) under a three-year program to develop a bush fire management strategy incorporating a fuel load reduction plan for the area around Tropicana.

The parties finalised a letter of intent (LOI) earlier in 2013 to develop a strategy to clearly define fire management at the site which, when finalised, will be able to be utilised throughout the Goldfields.

What has already emerged is the importance of the plant species and vegetative eco system at Tropicana and the role they play in bush fire management.

“We have an exceptionally complex eco system at Tropicana so as a consequence, a simple fuel reduction protocol therefore has an environmental consequence,” Tropicana Manager: Approvals/Compliance/Sustainability Belinda Bastow said.

“Fire is a complex and living organism and is influenced by many factors.”

Under the agreement, DEFES will assist the TJV in fuel load burns initially through development of a fuel load reduction plan, which is currently being formulated from field data, along with training of Emergency Response Team personnel on bush fire management, along with support and supervision of any on-ground work.

According to DEFES environmental protection branch manager Ralph Smith the partnership is a win-win for both parties.

It provides the Department with access to the land and research on fire behaviour, fuel loads and moisture content of plants species in such a remote area of WA that it would otherwise not have, providing invaluable research when it comes to fire models, which can be applied to the region to achieve optimal results.

In Western Australia there are two ways to do prescribed burn offs. One is via fuel reduction burns based on certain weather conditions and the other is to actually understand the environmental factors which influence fire.

The TJV and the DEFES are currently focused on the latter approach in an effort to understand Tropicana’s fuel load and how best to establish a fire regime or burning protocol for the region.

“We are still working through exactly what the protocols will be but what we know from the data we have got is that Tropicana has a very complex eco system and that strategies applied elsewhere, such as the Pilbara, are simply not relevant,” Bastow said.

Prior to this, the TJV undertook a number of fuel load assessments based on vegetation and soil types, samples of fuel moisture taken from dew points over a 24-hour period, coupled with weather data such as wind conditions and the fire history of the region based on imagery.

Between 100 and 200 different samples of vegetation were taken and analysed for fuel content.

“We still have a lot more science work to do around it but we already know we can’t burn Spinifex, Mallee and Mulga together as this results in an environmental impact on one or more vegetation communities that could have a long-term impact,” Bastow said.

Future work will involve monthly monitoring of fuel moisture over a 24-hour period in certain locations, particularly those areas burnt previously, to assess recovery times as that will influence the frequency rate of future programs.

To date the TJV has undertaken trial burn offs on two separate occasions. The first covered four areas totalling 182 hectares, while the second spanned three areas, totalling 234 hectares.

“We started burning in July, but it appears we may have to start earlier and bring that forward to May and June,” Bastow explained.

“We may do some in May targeting the Mallees and then return a few weeks later to burn the Spinifex.

“We also need to do some work around what the dominant species are feeding the fire and how they might react and their recovery times. There is also some remote sensing work that we are going to look at around exposed ground areas.

“One of the key areas we need to still do work on is determining what happens with the moisture content overnight, as well as establishing some strategic mineral earth breaks around our key assets.”

Bush fires in the Tropicana region are traditionally most frequent during the peak lightning strike period between September and December.

Already this year the DEFES has undertaken two visits to Tropicana and established a series of weather stations, along with its own independent fuel load assessments.



Tropicana Manager: Approvals/Compliance/Sustainability Belinda Bastow.  
Photo taken by Philip Gostelow.