

Wheatbelt Dieback Eradication Projects

Background

Since 2012 the Wheatbelt Materials Service has been working on establishing dieback eradication trials in order to source dieback free road building materials through the environmentally sensitive areas of the region including but not limited to the Gleneagle Forest through which both Albany Hwy and Brookton Hwy traverse and also within the road corridors throughout the Wheatbelt containing rare and endangered flora.

Why Eliminate Dieback?

Dieback is an insidious disease that ravages native flora populations across the state and country destroying many of the indigenous plant species creating a wasteland from formerly pristine plant communities.

Human activity such as construction works, use of recreational vehicles, and just walking with dirty boots from a diseased area to a non-diseased area has the potential to spread this disease.

If MRWA can mitigate the spread of the disease through our sensitive and remnant flora populations which are not found anywhere else in Australia or indeed the world we would have met our corporate obligation to preserve and conserve our natural habitats whilst still performing construction and maintenance activities.

The following projects are an indication of the commitment and corporate desire to find ways to conduct our business in an environmentally friendly and sustainable manner.

Dieback Project 1 – Fallow Trials

Two trial sites have been installed by MRWA Wheatbelt in 2017 in the Gleneagles Forest adjacent to Albany Hwy. The aim of these trial sites is to prove / disprove

a theory held by Murdoch University that areas of jarrah forest determined as infested by dieback disease could be made dieback free by removing all vegetation and maintaining the trial sites in a fallow state for a number of years.



The theory is that the dieback pathogen will eventually die without the presence of its varied hosts (vegetation) that it needs to survive.

Sampling and testing the gravel for the disease has detected thus far that the disease has been eradicated from the surface gravel. But evidence has indicated the disease still survives in large root matter a few hundred millimetres from the surface.

The two trial sites will undergo a third sampling during the 2020/21 financial year which will be between 3 – 4 years since the two plots were cleared.

This project was a collaboration between MRWA Wheatbelt, DBCA and Arbor Carbon. With scientific review and advice through the dieback eradication community including CPSM (Centre for Phytophthora Science & Management – Murdoch University)

Dieback Project 2 – Metham Sodium

MRWA established in 2019 an upscaling trial from a previous prototype trial under taken by Dr Elaine

Davison (Adjunct Professor to Curtin University), B&J Catalano and Nufarm in 2012 to treat gravel with the chemical metham sodium to prove that gravel can be sterilised and made dieback free.

The Wheatbelt trial engaged a working group comprising Wheatbelt Materials, DBCA, Dr Elaine Davison and Culford Agri Industries as the commercial partner. The trial was located at Culford which is situated approximately 90km south of Perth adjacent to the Albany Highway. The necessary plant, training, PPE and chemicals were procured to conduct an upscaling trial by treating 2,300m³ of gravel with metham sodium. A large number of dieback infested baits were installed within the treated stockpile of gravel to verify that the toxic gas was indeed active in sterilising the soil from the pathogen.

The outcome of this trial was that many lessons were learnt from upscaling in areas of plant, dosing equipment and methodology. The trial was indeed a success in that the vast majority of dieback infested baits were themselves sterilised from the dieback pathogen.

From the 2019 trial MRWA is on the cusp of writing a specification for the treatment of gravel by metham sodium to sterilise any dieback pathogen.

Culford is soon to be engaged to conduct a larger dosing of 30,000m³ for upcoming works planned for the widening of Albany Highway. This work is no longer a trial but a full commercial production of dieback free gravel.

It is envisaged that once a Specification is written, that dosing of gravel in other areas of the state can occur to sterilise gravel for proposed road works to mitigate the spread of the insidious disease.



Dieback Project 3 – Does Dieback Exist in Gravel Sourced from a Farm Paddock?

The vast majority of gravel used in the Wheatbelt for maintenance and construction activities is sourced from farm paddocks. A question that needs to be addressed is, does the dieback pathogen exist in gravel sourced from farm paddocks?

This question is very important for the Wheatbelt as our road corridors contain rare and endangered species of flora that require protection against the spread of the dieback pathogen.

This project is the final dieback eradication study in the series and will start during the 2020/21 financial year, firstly with a desktop and scoping study to establish what works have been done previously in this area and what factors need to be included in a potential trial to verify the existence of any of the pathogen in farm paddocks that have been cleared of native vegetation for long periods of time.

It is anticipated that the study will be predominantly Wheatbelt focussed as this region uses the most paddock sourced gravel for its operation but with a possible inclusion to cover the wetter areas of the Southwest and / or Great Southern regions.

A working group comprised of MRWA Wheatbelt, DBCA and Arbor Carbon has been established to undertake this important work and hopefully provide an answer to the question one way or the other.



These three projects puts Main Roads WA at the forefront of dieback disease control in Western Australia.

For further information contact Regional Materials Manager Wheatbelt - Garnet Gregory