

Sherwood Arboretum factsheet

Kauri Pines along Sir Matthew Nathan Avenue



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Background

The Kauri Pines along Sir Matthew Nathan Avenue have been part of Sherwood Arboretum's story since they were first planted in 1925 as part of World Forestry Day celebrations. Over the years, they've become one of the Arboretum's most recognised and treasured features.

Since the avenue was first planted in the 1920s, the Kauri Pines in the southern section have struggled to grow. This has been caused by a combination of factors, including groundwater, prolonged waterlogging, soil acidity, aluminium toxicity and other environmental constraints. These conditions are most pronounced in the southern section of the avenue and have affected the health of Kauri Pines for many decades.

Over the last 100 years, many of the trees in the southern section have been replaced with Kauri Pines, and many of these have either died or failed to grow properly. After more than a decade of research, investigations and trials of different solutions, we're now planning to replace the remaining Kauri Pines in this section with a species better suited to the site. This will help restore the avenue's long-term health and preserve the Arboretum as a place the community can enjoy for generations to come.

A way forward

The most responsible long-term approach for the southern end of the Avenue is to reestablish the avenue with a tree species that are naturally suited to the site's soil and water conditions.

Weeping Paperbark (*Melaleuca leucadendra*) has been identified as the best species for the site. Unlike the Kauri Pines, it is well suited to the local conditions and is expected to grow well in the southern section of the avenue. This approach will help preserve the look and feel of the avenue while creating a healthier, more resilient canopy for future generations to enjoy.

What other options have been considered?

We've investigated and tested a number of options to address the ongoing decline of the trees, including:

1. **Continuing to replant Kauri Pines:** this approach hasn't worked. Expert advice tells us that Kauri Pines are not suited to the soil conditions in the southern section, meaning further attempts would likely lead to the same outcome.
2. **Major soil replacement and drainage works:** This option was investigated but would involve significant excavation and the risk of disturbing acid sulphate soils. Even if the existing soil was replaced, there is a significant risk the acid sulphate would permeate the new soil over time. The scale of the works would also be highly disruptive to the Arboretum.



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3. **Planting trees on raised mounds to improve growing conditions:** We have previously trialled this approach. While raising the planting level may offer some short-term benefit, the tree roots eventually grow beyond the mound and into the surrounding soil, where they are exposed to the same challenging conditions.

Approach adopted - Working with the site, not against it

Our investigations found the issue isn't simply about drainage. The southern section has a combination of challenging conditions, including heavy clay soils, prolonged waterlogging, high soil acidity and naturally occurring aluminium toxicity. After years of research and testing different approaches, we've found that planting a species better suited to these site conditions offers the best long-term future for the Avenue.

How will the project be delivered?

We're seeking heritage approval from the Queensland Department of Environment, Tourism, Science and Innovation so we can begin renewing this section of the avenue over the next three years. The project will involve gradually replacing 35 trees that have declined due to the site's challenging growing conditions. Of these, only one is believed to be part of the original 1920s planting, and sadly that tree has already died.

We'll be planting large, well-established nursery-grown trees and giving them the care and support they need to get off to a strong start. Our goal is simple: to restore the health and appearance of Sir Matthew Nathan Avenue and ensure this much-loved part of the Sherwood Arboretum thrives for future generations.

Community engagement

We know the Sherwood Arboretum means a lot to the community, and we'll continue keeping people updated as this project moves forward. We've been liaising with over 20 key stakeholders, including the Friends of Sherwood Arboretum, to share information about the proposal, and we'll keep providing updates throughout the approvals process and as work gets underway.

Next steps

The next step is to apply for a Heritage Exemption Certificate. We'll continue sharing updates with the community as the project progresses and, if approved, begin renewing this section of the avenue in stages over the next three years.