



City of **HOBART**

**MEMORANDUM: LORD MAYOR
DEPUTY LORD MAYOR
ELECTED MEMBERS**

TREE ROOT DAMAGE TO ROADS

Meeting: City Infrastructure Committee

Meeting date: 29 June 2022

Raised by: Lord Mayor Reynolds

Question:

Can the Director advise how current street tree planting practices have the ability to prevent tree roots from raising and damaging roads? Is the new treatment 100% effective or will there still be some damage?

Response:

Trees are an essential part of the city's infrastructure- for many well documented reasons - including community health and wellbeing, reduction in temperatures, reducing air pollution and reducing stormwater runoff.

The factors that influence tree root growth are highly complex and variable, with most of these factors being underground where they cannot be easily observed. Typically, where we see the greatest conflict between roots and road surfaces is because the conditions below the surface are hostile to tree root growth that there is very limited soil volume. In these circumstances, the best conditions for tree roots are at the interface between the road surface and the sub base- as this typically is where there is access to air, water and nutrients (essential for survival of roots and indeed all living things). Roots cannot penetrate deeper as the road base and below is heavily compacted- this results in the expansion of roots below the paving and heaving of the surface.

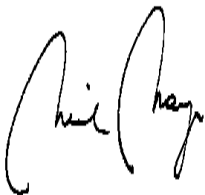
The new planting practices that have been deployed in our roads projects (for example the Giblin Street project) consist of a structural soil. This structural soil is comprised of gap graded rocks that can be heavily compacted to meet the pavement structural requirements, but that also retain pores between the rocks. There is a growing media mixed throughout, and this setup allows deeper root penetration and

growth. As roots are provided with favourable growing conditions deeper below the surface there is not the same root-surface conflict seen in traditional pavement cutout designs.

Further, these structural soils are typically installed along a trench in the centre median of a road- this encourages trees roots to proliferate in this more favourable environment within the median rather than into the trafficable surface.

Roads are complex and changing environments, and no system (whether related to tree roots or not) would be able to provide a 100% guarantee. However, structural soils and load bearing cells are becoming common place in Councils throughout Australia and internationally as a way to enable a healthy and abundant tree canopy, while minimising tree root conflict.

As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.

A handwritten signature in black ink, appearing to read 'Neil Noye', written in a cursive style.

Neil Noye

DIRECTOR CITY LIFE

Date: 7 July 2022
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