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REVIEW OF CITY OF NEWCASTLE'S CLAIM THAT 75% URBAN CANOPY GOAL HAS ALREADY BEEN ACHIEVED

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ArborViews estimates that 4,200 m^2 canopy (tree and shrub) has been removed from the Foreshore Park within the past 5 years.

City of Newcastle (CoN) has claimed that it is "three-quarters of the way towards its goal of creating a greener public space within the Foreshore precinct." (21 September 2020. https://www.newcastle.nsw.gov.au/council/news/latest-news/city-on-track-to-deliver-7-000-square-metres-of-ad)

CoN plans to increase shade canopy from 2,800 m^2 to 9,800 m^2 and claims that, "they have already contributed a projected shade canopy of 7,370 m^2, or more that 75% of the City's overall goal."

Forty-two Norfolk Island pines and 10 kentia palms have been planted according to The CoN (*Foreshore Precinct – New Tree Plantings,* Nov 2019, Issue 1) . Since the planting, three of the pines have failed, two of which have been replaced.

The phrase, "already contributed a projected shade canopy" is ambiguous but whichever way one understands it, the claim of "more than 75% of the City's goal" appears flawed.

Canopy "already contributed" from the 51 surviving new trees planted is about 650 m^2, or less than 7% of the City's overall goal.

The canopy from the newly planted trees is less than a sixth of that estimated to have been removed in the last 4 years.

The projected canopy of the newly planted trees in 20 years is up to 2,400 m^2, or 25% of the City's overall goal.

Even projecting well beyond 20 years and considering trees the size of the largest of the 100-year-old specimens around Stockton Hospital, the projected canopy would be 6,750 m^2, or less than 70% of the City's goal of 9,800 m^2.

Key points.

- The 39 Norfolk Island pines planted and still surviving since 2018 currently each have an average crown area of 14 m^2, contributing less than 550 m^2 new canopy.
- The 42 Norfolk Island pines planted could potentially provide the following canopy:
    - 2,111 m^2 in 20 years. Estimation based on the current size of the Norfolk Island pines planted along the foreshore at Wickham approximately 20 years ago.
    - 6,465 m^2 in 100 years. Estimation based on the current size of the largest of the 100-year-old Norfolk Island pines in Stockton.
- It is estimated it would take at least 20 years and probably more likely 30 or more years for the Norfolk Island pines to attain a crown spread of 10 metres, which equates to 80 m^2 canopy per tree. Forty trees could theoretically eventually achieve 3,300 m^2 total canopy.
- The kentia palms currently have an average crown area of 6.6 m^2, a total contribution to current canopy of 66 m^2. This may increase up to 28 m^2 average per palm as the palms grow. The 10 kentia palms may contribute 280 m^2 canopy.
- An optimistic estimate of canopy from these 50-odd trees in 20 years would be 3,580 m^2.

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Ian McKenzie has more than 30 years' experience in arboriculture and urban forestry. Ian co-authored the urban forest policy adopted by Local Government NSW annual conference in 2004. In 2009, Ian received the City of Newcastle Service Award, awarded for his contribution to sustainability, specifically in relation to urban forestry.