

Our Ref :V01011:JDH

Contact Jason Hick



Shaping the Future

23 March 2007

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Dear Nelson

Further to queries raised at the City of Joondalup briefing session on the evening of Tuesday 20th March in relation to "dwarf Tuart" trees occurring in the Parks and Recreation reserve north of the Burns Beach Estate, (the area being ceded by the Burns Beach Property Trust to the State Government), we provide the following information that has been compiled by our Senior Botanist, Dr. Shane Chalwell.

Tuarts (*Eucalyptus gomphocephala*) are a common, and the largest, tree of the Swan Coastal Plain. The species ranges from north of Jurien Bay to the Sabina River north west of Busselton, and is mainly confined to the Quindalup and Spearwood Dune Systems, being more common on the latter. The soils of these units are generally sandy and well-drained with high percentages of calcium carbonate (Semeniuk and Glassford 1989). The largest individuals are generally found in the south of its range, but this largely depends upon conditions. Where deeper soils occur in a sheltered position with an ample water supply in the northern part of the range, Tuarts can reach similar sizes to that attained in the forest (Keighery *et al.* 2002).

Although not generally known to possess lignotubers, the existence of a mallee form of Tuart (referred to by others in the Council Briefing Session as "dwarf Tuarts") indicates the species can occasionally develop them under certain conditions. This mallee form has been recorded mostly from Quindalup Dunes in sporadic locations ranging from Guilderton to Dalyellup, south of Bunbury (Coates *et al.* 2002 and B. Keighery (cited in Syrinx 2005)). Additional populations have been recorded at Alkimos (Syrinx 2005) and Burns Beach. The three populations at Burns Beach were described as *Eucalyptus gomphocephala* Low open woodland by Alan Tingay & Associates (in Taylor Burrell *et al.* 1999). The mallee form of Tuart is not currently recognised as a distinct infraspecies (Syrinx 2005).

On 22nd March 2007, two botanists from Cardno BSD visited the Parks and Recreation Reserve adjacent to the Burns Beach estate to undertake a census of the mallee-form Tuart. The area was traversed on foot and all obvious stands of eucalypts inspected to identify the species and count the number of individuals if they were Tuarts. All but one stand of eucalypts encountered in the survey were Tuarts. Most trees were low in stature except in swales and protected areas where some trees had attained about 10 metres in height.

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A total of approximately 90 mallee Tuarts were recorded within the bounds of the Parks and Recreation reserve north of the Burns Beach Estate. All mallee-form Tuarts were observed to occur on the Quindalup Dune system. This confirms that the occurrence of mallee Tuarts is not restricted to the area within the Burns Beach Estate (within the area known as the "Special Design Precinct") and that the long-term retention and management of the Parks and Recreation reserve for conservation purposes will see to facilitate the long term retention of mallee Tuarts in the local area. It is also our understanding that the Burns Beach Property Trust intends to retain a number of stands of mallee Tuarts (approximately 20) within the proposed area of Public Open Space within the Special Design Precinct as shown in the Burns Beach Structure Plan. This is in line with the approach taken to retain mature Christmas trees (*Nuytsia floribunda*) in the southeast corner of the site.

Should you require any additional information regarding the occurrence of mallee Tuarts within the Burns Beach Estate or adjacent Parks and Recreation reserve please do not hesitate to contact us. Alternatively, we would be happy to attend a site visit with officers from the City of Joondalup to clarify this situation should this be required.

Yours sincerely



Jason Hick
Manager, Environmental Services
for **Cardno BSD**