

# Rapid assessment: Kangaroo Island koala population update following the 2019-20 summer bushfires

## Koalas on Kangaroo Island

Koalas (*Phascolarctos cinereus*) were introduced to Kangaroo Island in the 1920s. Eighteen animals from Victoria were released in Flinders Chase National Park as part of a national attempt to protect the species after it was in danger of becoming extinct due to extensive hunting.

Numbers expanded rapidly on Kangaroo Island and by the 1940s there was significant over-browsing impacts on native vegetation.

The population expansion seen on Kangaroo Island has also occurred elsewhere in South Australia. Koala densities are now sufficiently high in some areas of the Mount Lofty Ranges, where koala browsing is similarly impacting native vegetation.

In 1997, the South Australian Government initiated the Kangaroo Island Koala Management Program to reduce the island's introduced koala population to a sustainable level to prevent over-browsing of native vegetation.

The program has involved relocating koalas, managing koala habitat, monitoring koala density and tree condition, and sterilising koalas.

A population survey has been conducted every five years to estimate the size of Kangaroo Island's koala population. In addition, tree condition is monitored annually.

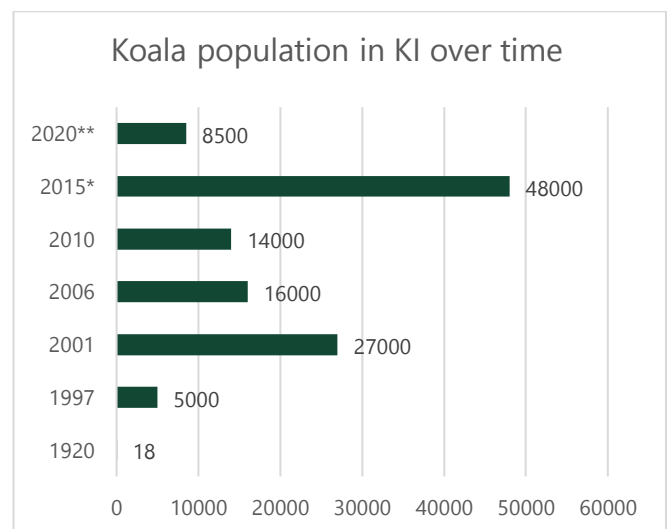
Since the program began 23 years ago, more than 12,500 koalas have been sterilised, making it one of the largest fertility control programs in the world. About 3800 of these koalas have been relocated to the state's South East.

The reduction in koala densities through this active management has resulted in improvements to the health of Kangaroo Island's unique vegetation communities and ensured the sustainability of the koala population itself.

## Impact of the 2019-20 summer bushfires

The summer of 2019-20 saw unprecedented bushfire events across Australia. Kangaroo Island was seriously impacted, with almost half of the island burnt.

Prior to the bushfires, the Department for Environment and Water (DEW) estimated the Kangaroo Island koala population at 48,000. Following the bushfires, DEW estimates that approximately 8500 koalas remain, based on the assumption that most koalas within the area impacted by the bushfires perished.



\* blue gum plantations were first surveyed in 2015, therefore the increase in numbers.

\*\*Estimated population based on modelled koala distribution and pending island-wide survey

## Rapid assessment of the population

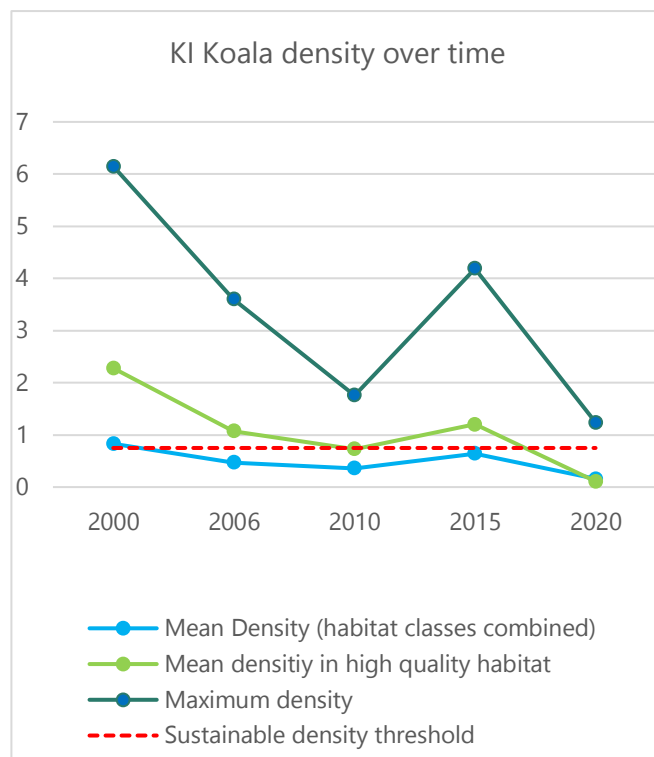
In June 2020, DEW undertook a rapid assessment of the koala population on the island, adopting a new methodology that uses drone-based thermal imaging technology to detect the heat signature of koalas.

This rapid assessment, undertaken approximately five months after the bushfires, found that koala density had not increased significantly in unburnt habitat following the fires. Densities across the 34 sites surveyed post-bushfires were lower than densities observed across all sites in the 2015 census.

These results are consistent with the assumption that most koalas within the fire scar perished in the bushfires.

The median koala density across all the surveyed sites was 0.16 koalas per hectare, with only one of the sites exceeding the 0.75 koalas per hectare sustainable density threshold (see 'KI koala densities over time' graph and map).

There were 11 sites (32% of the total) where no koalas were recorded. The location with the highest koala density (1.24 koalas per hectare) was at Eleanor Creek, 400 m south-east of the fire scar.



## Next steps

Any future koala management on Kangaroo Island will require a more robust estimate of the remaining koala population's size and distribution.

During the coming months, DEW will deliver a comprehensive Kangaroo Island koala population survey to estimate the koala population size, density, and distribution, and assess impacts to vegetation, which will inform any future management actions.

