

# Solving Odour Issues for a Composting Facility



## CHALLENGE

A composting facility supporting sustainable waste management was experiencing odour emission issues affecting the surrounding community and needed an expert investigation.

## SOLUTION

Trinity Consultants Australia started with a comprehensive inventory of odour sources, collected samples from continuous and non-continuous sources and modelled emissions under various conditions.

## RESULT

Trinity's thorough investigation significantly improved odour management at the facility. Following the implementation of immediate and short-term measures, the facility now poses a low risk to the nearby community.

A Queensland composting facility takes green waste and blends it with organic solid and liquid waste materials to make mulches following composting in windrows. Products include soils, top dress blends, soil conditioners, mulches, sands and aggregates, and bio-filtration media. The facility plays an important role in sustainable waste management supporting circular economy. However, the site had been experiencing odour emission issues and brought in Trinity Consultants Australia to investigate.

The assessment focused on identifying key sources of emissions, sampling odour sources, and developing effective control measures. The investigation began with a comprehensive inventory of odour sources, evaluating their potential contribution to overall odour. Trinity collected samples from sources with both continuous and non-continuous odour sources, pinpointing significant contributors such as the facility's waste mixing bay and leachate pond. Using these findings, Trinity modelled the emissions to predict odour levels under various conditions. This modelling informed the development of a comprehensive odour mitigation strategy, including immediate, short-term, and long-term control measures. To ensure the best outcomes, Trinity evaluated the facility's odour management against industry best practices, identifying gaps and further measures.

Key recommendations included:

- ceasing the receipt of high-risk odorous wastes
- optimising composting conditions by oxygenation
- monitoring moisture, temperature, and carbon/nitrogen ratio
- enclosing odour sources.

Trinity's thorough investigation, involving sampling, modelling and analysis, significantly improved odour management at the facility. Following the implementation of immediate and short-term measures, the facility poses a low risk to the nearby community. As well, Trinity's experts have since assisted the client with ongoing applications and management plans.