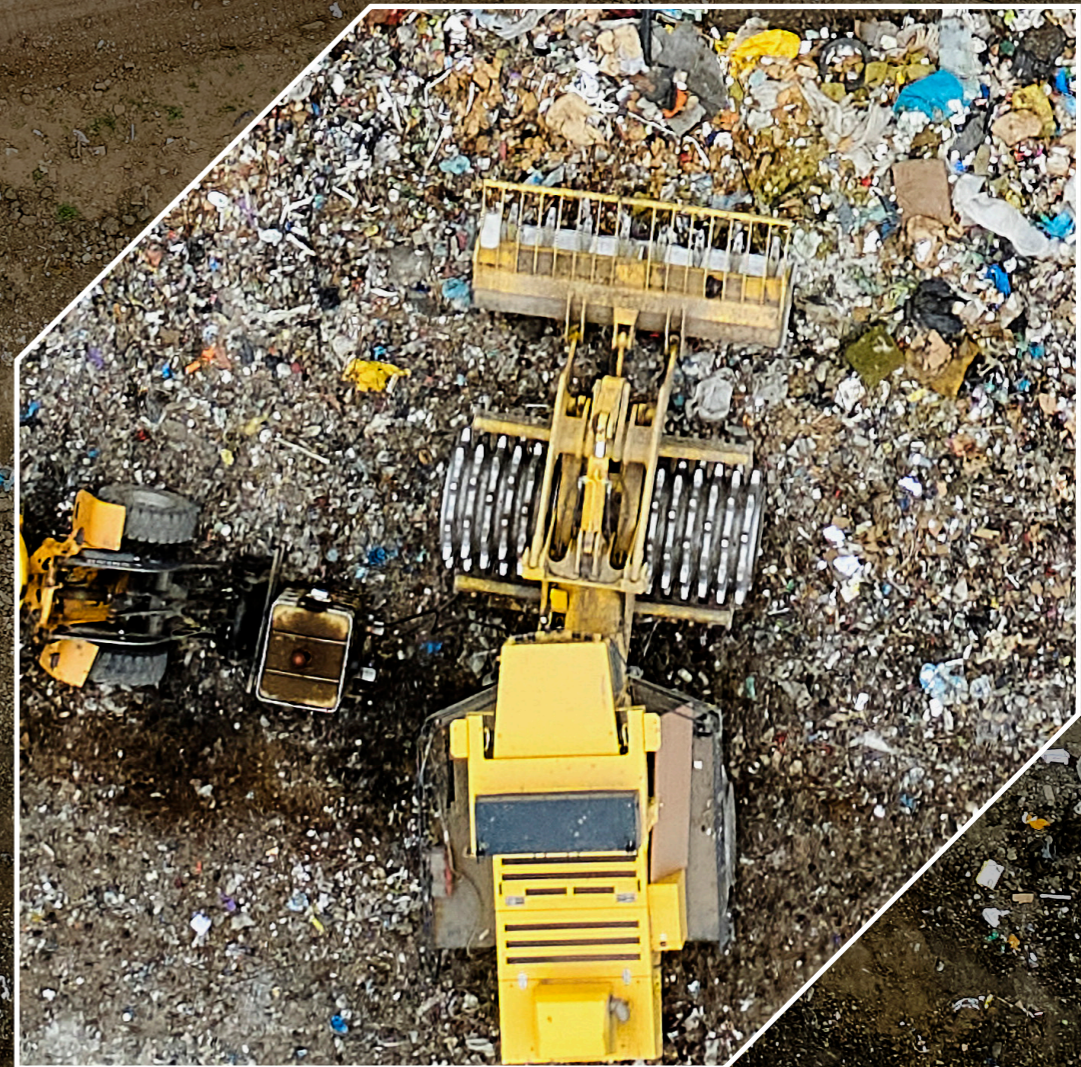# An odour abatement taskforce powered by environmental intelligence

envirosuite

About the client

A local environmental regulatory body in Australia manages several environmental activities within a busy industrial area that includes multiple landfills and composting operations.

The regulatory body's team is comprised of specialist officers working to investigate and respond to concerns raised by the community about odours, dust, and other environmental nuisance in and around the industrial area.
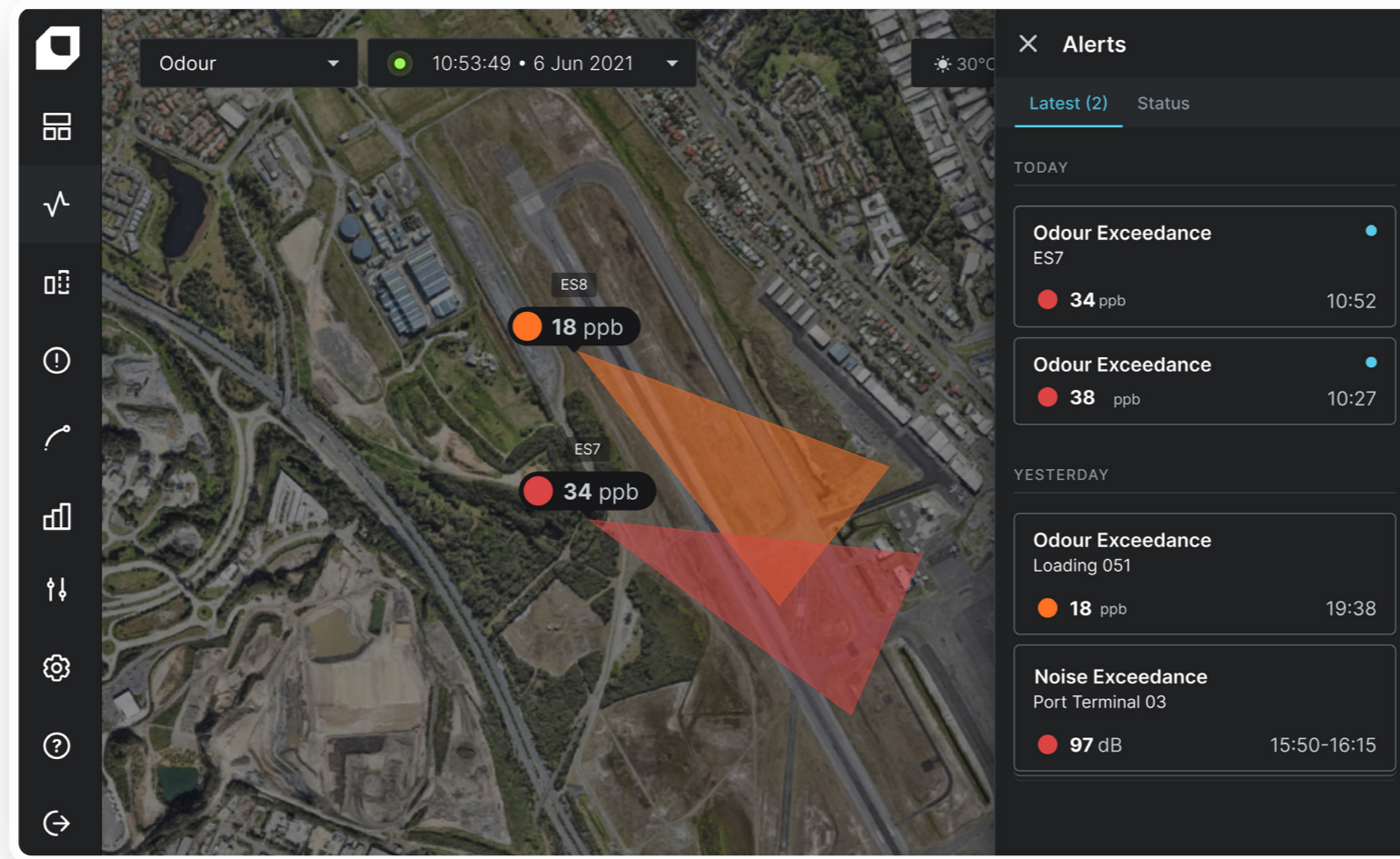
The taskfore now uses EVS Omnis reverse trajectories to identify the pathway that the air has travelled, leading up to a reported event in the community.

"
Over the last financial year, the state's environmental regulator carried out more than 7250 compliance checks state-wide to ensure our high environmental standards are met.

Local government official

Project Overview

Landfills and composting operations in the industrial area are under strict regulations to prevent odour nuisance complaints directed at their sites. The regulatory body in the area has established a team to ensure operational standards are met.

Odour emissions can occur during industrial and commercial activities—but not all odours are unlawful. The team's role is to investigate concerns about odours released by operators conducting activities it regulates to determine if they have breached their environmental authority.

The taskforce needs an ideal solution to rapidly identify odour sources, proactively manage nuisance complaints, and hold the responsible operator accountable.

The designated team, comprised of specialist officers, are always on the move to investigate and respond to air quality

concerns raised by the local community.

The odour abatement taskforce officers currently face challenges when it comes to monitoring odour concentration in the industrial area as it consists of multiple landfills and composting operations. While odour nuisance complaints only provide a snapshot in time of an issue, there's fragmented data from multiple monitor locations across the area. It is difficult for the authorised officers to tell what causes exceedances as it could be from a range of different activities.

In addition, the authorised officers need to be armed with hard evidence of air quality impact to engage with operators in the industrial area. Manually collecting this information from multiple locations is time consuming and only provides information on past events.

KEY RESULTS

Rapid analysis of thousands of dust and odour complaints

Correlating trends in odour, weather and complaint sources

Significantly faster resolution of community odour complaints

Challenge →	Solution
Identifying odour sources in the area	Pinpointing sources of air quality and odour issues using reverse trajectory meteorological modelling
Analysis of community complaints	Correlating trends in odour movement, weather conditions, timing and the potential sources of specific industry activities and behaviours that cause nuisance odour
Allocating incident response teams	Data insights that assist with focusing investigation efforts on areas of concern
Knowing when odour may occur	Real-time weather conditions and forecasted weather data to predict when and where odour may occur and the source
Manual collection of fragmented data	Real-time odour monitoring and visualisation to advise on potential nuisance complaints
Tracking odour concentration threshold exceedances	Alerts for odour threshold breaches to receive early warnings of potential exceedances
Validating data to support authorised officers	Highly accurate, reputable data to support compliance officers in making informed decisions about sites generating odour

Solution

In 2020, the regulatory body contracted Envirosuite to understand odour nuisance caused by landfill operations in an industrial area. The local body's designated team worked with Envirosuite to install 6 eNose monitors across the area and implement a comprehensive Environmental Intelligence platform, EVS Omnis.

EVS Omnis provided the team with visualisation of continuous monitoring of odour concentration in the area and real-time alerts for threshold exceedances.

EVS Omnis allows the officers to track reported odour sources and the affected pathway using the platform's reverse trajectory modelling feature. Trajectories are based on three-dimensional and non-steady state meteorological modelling. Users can determine the source of an odour complaint from the mapped complaint location.

Trajectories are unique to Envirosuite and can be integrated with a ticketing system for odour management. These can be configured to generate automatically in the platform if a complaint is submitted by community members.

Results

Since the implementation of EVS Omnis, the designated team has rapidly analysed thousands of air quality complaints. It has streamlined ongoing emissions investigations and undertaken proactive

odour surveys with far more clarity.

Odour reports can now correlate trends in odour emissions movement, weather conditions, and the potential sources of complaints. This can be instantly linked back to specific industry activities and behaviours that cause nuisance odour.

This information, along with Envirosuite's predictive weather technology helps forecast the likelihood of odour nuisance in a particular area and assists the ground staff to respond proactively in the field.

Alerts can be configured so the taskforce is aware when a monitoring sensor detects odour above a pre-set level. This allows the team to take corrective actions more quickly and alert the responsible parties.

Moreover, the taskforce now use EVS Omnis reverse trajectories to identify the pathway that the air has travelled, leading up to a reported event.

The team also make calculated decisions based on forward trajectories to prevent unfolding odour nuisance complaints. Prior to EVS Omnis, the odour event would continue until reported by someone in the community.

The designated team uses Envirosuite's platform to conduct proactive odour survey operations, resulting in enforcement action taken against businesses causing odour emissions in the community.

Looking for more information on odour management?

Find out more about EVS Omnis.

Contact us →

Explore the platform →

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