



The problem with odour

Odour is extremely difficult to measure. The nose is the most sensitive measuring instrument known to man, often detecting odour levels in extremely low concentrations of parts per million. Concentrations this low cannot be accurately measured using scientific equipment, making benchmarking of odour concentrations and pinpointing of sources difficult. Similarly, because individuals have different sensitivities to odour, it is difficult to clearly state what an acceptable limit is within the broader community.

Weather conditions and topography also impact the perception of odour - still nights with light winds; dry, hot and windless days, and the presence of tall buildings or hills surrounding the affected area can all contribute to varying levels of odour.

Odour is measured in two ways - Dynamic Olfactory testing and chemical analysis of air samples. Dynamic olfactory testing is conducted by experts who sample the air and assign odour levels based on their perception of the odour. This method can detect odours in small quantities where chemical analysis may not, but is less scientific. Odour levels are measured in odour units per cubic metre for Dynamic Olfactory testing, and parts per million in chemical analysis.

From sampling conducted in the Parkwood region, most odours are less than one to two parts per million, and therefore can't be scientifically measured, but can still be detected by the human nose.

In the Parkwood area, three distinct "nuisance" odours have been identified - two associated with BGC Fibre Cement, being a wet cement-type odour and a sulphur-based odour similar to that found in natural gas - and the other from an unknown source, but often described as a "bore water" smell. It is understood that a range of odours that may be a nuisance to residents are also emitted by other industries on the Canning Vale industrial estate.

The sulphur-based odour is a distinctive smell sensitive to the nose at low concentrations. It is added to natural gas as a safety measure so that it can be detected if there is a leak or a gas appliance is accidentally left on. The odour is not known to cause health problems and is therefore more of a nuisance than a health risk.