

Aycliffe Quarry Site Update – November 2024

Air Monitoring Unit

We have had an air monitoring unit installed at a location close to the landfill site since June. The unit is monitoring key gases generated on a landfill site like methane and hydrogen sulphide. The team which manages the unit have now produced an interim report summarising the key findings so far. This report can be found at our citizen space page (titled: *Air monitoring station interim report_June_Sept*). We have also shared this report with UK health security agency, who have been providing health advice on the matter.

The findings from the report are encouraging as whilst they show an occasional presence of hydrogen sulphide (H₂S) it is not present at any significant levels or for any concerning periods of time. The report shows that the level of H₂S has not breached the World Health Organisation (WHO) 24 hour average limit (150 micrograms per cubic meter), with a peak 24 hour average result of 2.9 micrograms per cubic meter. The odour annoyance threshold is set at 7 micrograms per cubic meter, the data gathered so far indicates that the air quality at the monitoring location was above this value for 0.7% of the monitoring period. This equates to 16 hours over a period of 98 days (or 2352 hours).

Site Engineering

Engineering works have continued on the site, with the completion of the lining works in cell 6a. Completion of this work will ensure the site have enough available void space to tip into during the winter. We expect the site to be tipping in this new cell soon as they look to complete infill in cell 5.

As cell 5 nears completion the site has been focusing on installing permanent gas extraction infrastructure. A drilling rig has been on site for a few weeks now completing the installation of deep and shallow gas extraction wells. These wells should be connected into the gas extraction system soon.

Total gas extraction on site continues to be significant when compared with a year ago. Gas extraction rates on the site have increased from 250 cubic metres per hour last autumn to 1175+ cubic metres per hour now. The site operator is exploring the option of installing an additional gas extraction well to manage the projected further increase in landfill gas.

Capping works have continued across cells 2 and 3 and these are also expected to be complete very soon. Completion of the works described in this update will bring the site up to date with their engineering works ahead of the winter period.

Why can I smell something one day and not another?

This is primarily to do with the weather. Landfill sites are generally totally open to the atmosphere and the elements, unlike a lot of other industries we regulate. Therefore, they are more reactive to a change in weather conditions. For example, a change in wind speed or direction can affect where or when an odour might be noticeable. If odour is evident on a landfill site it is generally more noticeable in cooler and more still conditions, particularly if the source of the odour is landfill gas. Atmospheric pressure also affects landfill gas, falling pressure can lead to a greater emission of landfill gas from uncapped areas.

The areas on site where odour may be generated also change over time as more waste is brought into the site and cells are progressed. Effectively the site evolves and changes shape/form over time. Therefore, the measures needed to mitigate odorous emissions now

might not necessarily be the same as those required in 3 months, 6 months etc. It is for this reason primarily that it is important that landfill site operators constantly keep under review their odour and gas management arrangements and keep looking to develop their control measures to keep pace with their site's progression.

The following aerial images detail progress with the capping works in cells 2/3 towards the end of the summer

