

STREET SCENE & ENVIRONMENT ADVISORY BOARD

MEMBERS BRIEFING NOTE

25 July 2018

Findings from the investigation into landfill gas at the former Joco Pit landfill now comprising Tolsey Mead and Eaglestone Close

Members will be aware from board in February, the Council commissioned Leap Environmental Ltd to investigate an apparent increase in methane concentrations at one of our landfill gas monitoring locations (BH2) at the former Jocopits site. I am writing to let you know of the latest situation which I hope that you will find helpful and which I believe shows a positive outcome to our investigations to date.

In February 2018, 8 new monitoring boreholes were installed across Tolsey Mead and Eaglestone Close. Soil samples were collected from the excavated material and sent to a laboratory for chemical analysis. For the first month continuous gas analysers were installed on the new monitoring boreholes which recorded gas concentrations every few hours. Following this, 2 months of weekly spot monitoring was undertaken. This included continued monitoring of the BH2 location. Leap have now produced a report into their investigation, the findings of which are summarised below.

Results

Landfill gases

Just prior to Leap's involvement, concentrations of methane peaked at 25.5% at BH2, which the Council has been monitoring since 1991, having previously been recorded well below this concentration. Carbon dioxide had been relatively stable (5-12%) and did not show the same sudden increase as methane.

The new monitoring boreholes installed in other locations in Tolsey Mead and Eaglestone Close have recorded a maximum concentration of 0.76% methane, well below that recorded at BH2. The maximum carbon dioxide concentration recorded was 10.16%, which is similar to that recorded by the council. None of these recordings caused undue concern. To further investigate the anomalous results at BH2, it was decided to collect vapour samples from this location to better determine what could be causing the elevated gases.

Soil vapour

Samples of the gas produced within BH2 were analysed for Volatile Organic Compounds and Petroleum Hydrocarbons. Both samples had recordable levels of hydrocarbons which were used to derive a site specific assessment criteria. None of the hydrocarbon vapour concentrations exceeded this criteria. However it is possible that this is the cause of the apparently high levels of methane at BH2.

Soil contamination

No significant signs of contamination were noted from the material excavated during the monitoring borehole installations. Chemical analysis of the material found only two slight exceedances when compared to the accepted Category 4 Screening Levels (C4SLs) used in the assessment of potentially contaminated land:

Lead – in one borehole lead was detected at 309 mg/kg compared to a C4SL of 200 mg/kg,

Asbestos – in one borehole amosite (pipe lagging) quantified as 0.0076% was detected.

The soil which recorded the elevated lead was collected 1m below ground surface; direct exposure is therefore unlikely. Likewise the identified asbestos was found 0.5m below ground surface and was located in a brick covered verge, preventing exposure to the material.

Conclusions

Results from this investigation have **not** demonstrated an unacceptable risk to human health from landfill gases with respect to Part 2A of the Environmental Protection Act 1990. The site has been assigned as low to very low risk.

Future works

Although only a low risk from landfill gas has been identified, the council will continue to monitor all locations on a monthly basis for at least the next 12 months. This is to ensure the situation on site does not significantly change following the works undertaken. The site will be reviewed after 12 months and a decision made regarding continued monitoring frequency.

The Council will also look to move forward with a Leap recommendation that BH2 be replaced. This will allow soil samples to be taken during installation and further soil vapour sampling to be undertaken to assess the contribution of petroleum hydrocarbons to the results

We have also arranged for Council Officers and representatives of Leap Environmental to be available at a drop in session at Potters Mede pavilion on

Wrotham Road on Tuesday 31st July where residents can talk to us about these results.

Leap's final report "Part 2A Site Investigation Report and Gas Risk Assessment" is also available to view on the dedicated Jocopits web page:

<https://www.tmbc.gov.uk/services/environment-and-planning/pollution/pollution-control-contaminated-land/former-joco-pit-site-in-borough-green>

If you have any questions, please contact Crispin Kennard, Environmental Protection Manager.