

ARROW 13

Authors: Claire Robinson and Alan Watson for Arrow

Registration number: 10024954

Case number: WS010003

Submission to the Open Floor Hearing, 23 October 2014

We wish to respond to the comments of Leslie Heasman of the Whitemoss Landfill Ltd team at the Issue Specific Hearing on the environment on 16 October 2014. The recordings of the session are not yet available on the Inspectorate website and so we are only responding to Ms Heasman's comments as we remember them.

Ms Heasman took issue with the findings of Dolk and colleagues (1998; full study submitted with ARROW 2 and with this document). Dolk and colleagues had found an increased risk of birth defects in people living less than 3 km from a hazardous waste landfill. Ms Heasman discounted Dolk's findings by referring to a study by Vrijheid and colleagues (2002) ("Hazard potential ranking of hazardous waste landfill sites and risk of congenital anomalies"; full study submitted with ARROW 2 and with this document).

Vrijheid and colleagues analyzed Dolk's findings by evaluating the hazard potential of the landfill sites by applying an expert panel scoring method. Vrijheid and colleagues wanted to find out if sites that the expert panel's scoring method suggested should pose a greater hazard were indeed associated with a greater risk of birth defects among nearby residents, relative to more distant residents.

Vrijheid and colleagues found little evidence of a relationship between the risk of birth defects in nearby zones relative to distant zones and the hazard potential of landfill sites as classified by the expert panel's scoring method.

However, far from enabling Dolk's findings to be dismissed, as Ms Heasman seemed to imply, the findings of Vrijheid and colleagues do not disprove or undermine the findings of Dolk in any way.

The main conclusion that can be drawn from Vrijheid and colleagues' work is that the hazard scoring method designed by their expert panel failed to predict the results obtained by Dolk's epidemiological study. Vrijheid and colleagues themselves stated that "without external validation of the hazard potential scoring method", interpretation of their findings was "difficult". They added, "Potential misclassification of sites may have reduced our ability to detect any true dose-response effect."

Vrijheid and colleagues' findings show that the 'experts' do not understand the causes of the effects seen by Dolk and colleagues – and by “causes” we mean the precise exposure routes and mechanisms. Vrijheid and colleagues' findings also show that these experts' theories on how the hazards posed by landfill sites should be evaluated does not reflect the actual hazard ranking found through epidemiology.

These findings by Vrijheid and colleagues are likely to increase public concern rather than reduce it, because some apparently 'low risk' sites such as old, closed sites appear to cause more harm than other supposedly higher risk sites. In an area surrounded by old and closed landfills, like Skelmersdale, the cumulative risk posed by the combination of old sites and the proposed new extension to Whitemoss is potentially alarming.