



## **Briefing Note 2 – Air quality**

### **Proposed energy-from-waste facility at Great Blakenham, Suffolk**

#### **Background**

Recycling and resource management company, SITA UK, submitted a planning application to build an energy-from-waste facility at the former highways depot at Lodge Lane, Great Blakenham, near Ipswich, in January 2011.

A decision on the planning application is expected by the Autumn.

The planning application will include detailed assessments of the impact the new facility would have on air quality.

Before it can open, the facility will need a permit, with strict environmental and operating conditions attached. The Environment Agency will only issue a permit if it is sure local people and the environment will be protected.

Using baseline information from an independent technical advisor, RPS (an international planning and environmental consultancy firm) air quality in the area is currently considered to be good and would remain so when the new facility opens. Emissions from the site would be well below the strict limits set by the Environment Agency.

#### **How does energy-from-waste compare with other processes?**

Like any process that involves combustion, the energy-from-waste facility would emit pollutants, but these would be low-level.

Modern energy-from-waste facilities are stringently regulated and now account for less than 1% of the total UK emissions of dioxins, compared with 18% from homes (cooking and heating); 3% from transport and 4% from other forms of electricity generation. Other sources include accidental vehicle fires, fireworks, bonfires, small-scale waste burning (for example, on building sites), incineration of other wastes; and the iron and steel industry.

#### **How are the emissions controlled?**

Burning waste at high temperatures (850°C) helps to prevent emissions forming in the first place. Trace amounts that remain are thoroughly cleaned, using scrubbers and filters. Metals are taken out, using a large magnet, bottom ash is recycled as an aggregate and the remaining fly ash is taken off site for specialist disposal.

What is released through the chimney is largely steam with tiny amounts of pollutants, which have to be below strict limits set by the Environment Agency. These are continuously monitored at the base of the chimney, and if levels start to rise, adjustments are made to the cleaning process. If, however in the unlikely event they continue to rise, or if the monitoring equipment fails, the facility would automatically shut down.



The results of the continuous monitoring have to be submitted to the Environment Agency, who also carry out their own unannounced spot checks.

### **What is the potential impact of emissions?**

The height of the stack (chimney), from which emissions are released, is determined using a computerised model to make sure the low-level pollutants from it are widely dispersed into the atmosphere to avoid high ground-level concentrations.

At 81 metres, the stack is two-thirds the height, and considerably slimmer than the now demolished BlueCircle chimney, which once stood nearby.

The current background levels of pollution were taken into account, along with meteorological data for the last five years, giving information on wind speed and direction which affects pollution levels.

Even allowing for the facility operating at full capacity and if it was releasing the maximum level of emissions allowed under the EU Waste Incineration Directive, the overall pollution in the area would still be below permissible air quality standards.

Emissions from the facility will actually be below the EU Waste Incineration Directive limits, and the facility is unlikely to operate at full capacity all of the time, so the actual level of pollution is likely to be better than predicted.

We also used a nationally-recognised model to assess the health risks of pollutants from the facility. This showed the risk from emissions from the proposed facility is well below the acceptable UK risk levels and is very much lower than the risk we face carrying out everyday activities.

### **What is the potential impact of emissions from traffic going to and from the site?**

Studies have shown the combined impact of emissions from the stack and from traffic going to and from the site, added onto the existing background pollutant levels, would still lead to concentrations well below the national air quality standards.

### **Will there be a nuisance from dust and odour?**

The energy-from-waste facility has been designed to make it very unlikely that nuisance could be caused from dust or odours. Firstly all of the unloading of waste takes place in an enclosed building. Secondly, latest technology will be used to keep dust and smells to a minimum and make sure they don't escape from the building.

**More information** – if you would like more information on air quality, or any other issues relating to the proposed energy-from-waste facility, please call our freephone information line: 0800 0721179.