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# NON-TECHNICAL SUMMARY

## TRECATTI LANDFILL SITE

# Landfill Gas Management Non-Technical Summary

**Submitted to:**  
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Golder Associates (UK) Ltd ('Golder') was commissioned by the Environment Agency to produce an assessment of landfill gas management at Trecatti Landfill Site ('the Site'). A technical report describing the review has been produced (Golder Associates, 2009)<sup>1</sup>. This technical report assesses three main issues:

1) *How effectively does the Site collect the landfill gas which is generated?*

Landfill gas collection efficiency is defined as the quantity of landfill gas which is collected as a proportion of the total amount of landfill gas generated within the Site. The Environment Agency has set a goal of 85% in its guidance. Golder reviewed all the readily available landfill gas generation models and concluded that of the five models tested, the Environment Agency's GasSim model gave the most accurate representation of the amount of gas generated. The effectiveness of the Site's gas collection was undertaken by comparing the amount of gas collected at the Site with the computer model forecasts of landfill gas generation. The proportion of landfill gas collected at the Site was higher than would normally be expected on a working landfill, at 88.5%, and so this meets or exceeds Environment Agency guidelines on gas collection efficiency.

Golder also visited the Site to inspect the gas collection system to assess how suitable and effective the installed equipment is being used to manage the landfill gas. The gas collection system was found to be suitable for the Site and maintained in very good condition. No defects which would affect the ability of the system to collect gas were noted. The system was found to be operating with the aim of maximising the amount of landfill gas collected, rather than maintaining the highest quality gas to benefit the renewable landfill gas power generation compound.

2) *How odorous is the landfill gas generated at the Site?*

In volume terms, the main gases present in landfill gas do not have an odour. The odour of landfill gas is due to small amounts of trace chemical constituents which are usually present. The trace chemicals in the landfill gas generated at the Site were analysed by an accredited laboratory. Of the odorous trace chemicals in the landfill gas, hydrogen sulphide was found to be present in the highest concentrations. The amount of hydrogen sulphide present in the landfill gas varied across the Site, with the highest concentrations present in the youngest waste.

3) *What should the Site do to minimise landfill gas emissions in the future?*

The Site is very efficient at collecting landfill gas. Golder Associates have made five recommendations to Biffa to help make sure most efficient collection of gas from most recently placed waste at the Site, on the basis that the youngest wastes deposited contained the most hydrogen sulphide. These recommendations re-emphasise the actions Biffa already take to collect the landfill gas and are:

- Continuing to maximise the gas extraction rate in areas of recently placed waste without unduly compromising the safety of operation of the gas system from excessive ingress of air;
- Continuing the installation of rigid plastic capping and gas collection infrastructure into new areas of waste as soon as it is practical and safe to do so;
- Using gas extraction wells with daily cover in areas where the rigid plastic capping cannot be installed;
- Keeping the operational area as small as possible to minimise odours from newly placed waste; and
- Using gas extraction in operational areas as soon as it is possible and safe to do so.

<sup>1</sup> Golder Associates (UK) Ltd. (2009). Report on Landfill Gas Management, Trecatti Landfill Site. Report No 08514290139.500/A.0



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