

Redhill Landfill, Surrey

Questions and answers about the site

February 2014

A brief background on Redhill Landfill

Redhill Landfill is operated by Biffa Waste Services Ltd and has been operational as a landfill since the early 1990s. The site can accept up to 750,000 tonnes of household, industrial and commercial waste per year. This includes up to 120,000 tonnes per year of asbestos waste.

The landfill site is divided into two areas. The first and oldest part of the site is known as the South West Area (SWA). This area stopped accepting waste in July 2009 and is permanently capped. This area is fully engineered to extract landfill gas and turn it into renewable energy for the National Grid. It is currently undergoing restoration with topsoil and grass seeding.

A separate soil treatment facility located on the restored SWA treats soils contaminated with hydrocarbons so that they can be reused for restoration of the landfill.

The second part of the site, the North East Quadrant (NEQ), opened in 2004 and will be operational until 2028. This area can be seen from, Redhill town, as well as the residential developments at Park 25 and Watercolours. This part of the site will be restored by 2030 in line with the site's current planning permission granted by Surrey County Council (SCC).

The NEQ is divided into eight phases, five of which have been filled and partly restored. Tipping is ongoing in cell six, the recently approved cell seven and a separate cell dedicated for asbestos wastes.

The site is fully engineered using clay and high density polyethylene liner (geomembrane liner) to protect surface water and groundwater.

Why does Redhill Landfill smell?

There are two main reasons which can produce an odour at the site:

1. As waste is deposited and disposed at the landfill it can produce an odour similar to a household dustbin.
2. Gases produced by degrading wastes produce an odour similar to that of rotten eggs.

Why has the smell been noticeable since the middle of January 2014?

Following a significant increase in complaints about odour from local residents, we investigated on site and found issues, including methane gas emissions not being managed correctly in the NEQ that were causing the odour problems.

Very high levels of rainfall have fallen across the UK since Christmas 2013. This has contributed to speeding up waste decomposition and landfill gas production but is not the only cause of the recent smell.

What is the Environment Agency doing about the smell?

We are aware of historical odour issues from the site and we have regulated Biffa to ensure they have improved performance over the past 18 months. As a result, odour complaints reduced significantly through 2012 and 2013. In mid January this increased significantly again.

We immediately investigated and on 21 January 2014 found a number of issues on site, including methane gas emissions not being managed correctly that were causing the odour problems. An Environmental Permit breach was recorded against Biffa as we considered they were not properly managing gas production within the current cell. Additional gas infrastructure was planned to be put in place by Biffa in January 2014, and we are formally investigating the reasons why this has not been installed yet.

We have also asked Biffa to produce both a short and long term action plan to tackle odour on the site. The short term plan includes a number of improvements to be made by the end of February 2014 to reduce landfill gas emissions. These improvements include:

- The installation of additional gas collection wells in Cell 5.
- The installation of gas infrastructure and collection wells in the currently operational Cell 6.
- The sealing of leachate wells, by the installation of new caps.
- Temporary covering and capping of completed areas.

We've also told Biffa to investigate other options to contain the gas emissions within the site boundary.

We will continue to carry out regular site inspections to monitor Biffa's progress with their action plan and make sure they operate the site in accordance with their Environmental Permit. We are also monitoring odours in the wider Redhill area when we receive complaints.

Due to the potential health concerns raised by the local community, we will be carrying out air quality monitoring as quickly as practicable. Once we receive the results, we will work with Public Health England (PHE) and Reigate and Banstead Borough Council (RBBC) to interpret them and make sure that the local community are kept up to date.

We understand that the odour has caused a considerable impact in the local community and we are working with Biffa, PHE and RBBC to ensure that these issues are resolved as quickly as possible.

When is the smell going to go away?

Landfill operations will always have periodic smells but this should not be a sustained event.

Redhill Landfill has a history of odour complaints but the numbers had significantly reduced in 2012 and 2013, due to a combination of effective regulation, engineering works, new gas wells and capping works.

The completion of the action plan, and specifically the gas infrastructure works, should improve the situation significantly. We have a further regulatory site inspection arranged for 14 February 2014 to review progress against the action plan.

We understand the impact that the recent odour issue is having on the local community and we will continue to use all our regulatory tools until the issues are resolved.

Regulating the site

How does the Environment Agency regulate landfills?

We regulate landfill sites through an Environmental Permit, which aims to make sure that it is operated to best practice and their impact on the environment is minimal. When we issue a permit for a landfill we review how the operator will manage the site to ensure that it is operated in accordance with the industry standards. Once a site is up and running we inspect it regularly to make sure it is operating within the conditions of its permit.

The conditions of the permit require that the operator only takes the correct waste, that water nearby is not polluted and that nuisances such as significant odours, litter blown from the site, noise and vermin do not affect communities in the area. If the operator does not comply with the conditions of the permit we advise on necessary improvements. Alternatively we may enforce the permit by issuing a warning, serving a notice taking away permission or by prosecuting the operator.

What action can the Environment Agency take?

We have a range of regulatory powers that we can use, including taking legal action. We want any site that we regulate to be well run and managed, and not cause harm to the environment or human health. We have not ruled out taking enforcement action. However, where there are issues at a site we will direct the operator to resolve these before taking any legal action as this can be lengthy and expensive for the tax payer.

What other organisations are involved?

RBBC is not the site regulator but we are working with both environmental health officers and local councillors to keep them updated on our current investigation and involving them in any future action that takes place.

SCC is not responsible for the regulation of the day to day operation of the landfill site. They maintain control over the development and restoration of the site through planning services. SCC is responsible for deciding whether or not waste facilities are required in Surrey and where they should be located. It is also responsible for deciding the final profile of the site, ensuring that it fits sympathetically into the surrounding landscape. It is also SCC who ensure that traffic movement to and from the site is in line with planning permission.

Can the Compliance Assessment Reports and reports about the landfill gas be put online for me to view?

The Environment Agency Compliance Assessment Reports and the monitoring reports that are provided by Biffa under their Environmental Permit are entered into our public register.

You can view our public register at our area office at Orchard House, Endeavour Park, London Road, Addington, West Malling, Kent ME19 5SH. You will need to make an appointment by calling 03708 506 5060 or by emailing: kslenquiries@environment-agency.gov.uk.

Landfill gas

What is landfill gas and is it harmful?

Landfill gas is made up of a mix of gases, predominantly methane (typically 60%) and carbon dioxide (typically 40%). It also contains a number of other 'trace' gases present in very small quantities. Some of the trace chemicals are very strong smelling and can be detected by the human nose at extremely low concentrations.

Both the main gases and the trace gases have potential hazards and could cause harm above a particular concentration. The control measures used by the operator are designed to ensure that these substances are not emitted from the site above these concentrations. The Environmental Permit for Redhill Landfill requires the operator to monitor and report their effectiveness as they are installed.

Each year as part of their Environmental Permit, Biffa are required to identify all the trace gases present within their landfill gas collected from the permanent gas extraction system.

We consult with and follow advice and information provided by health professionals when making decisions on the risks from landfills we regulate. The Environment Agency landfill sector guidance is produced in consultation with PHE (formerly the Health Protection Agency).

You can read more about the impact on health from landfill site emissions in "Impact on Health of Emissions from Landfill Sites", which you can view here: <http://bit.ly/V1A5al>.

If you do not have access to the internet please contact us using the details at the end of this document. If you have concerns about the impact of landfills on your health you should contact your General Practitioner (GP).

Is "burning" the collected gas sufficient to neutralise all harmful constituents of the gas?

The combustion of collected landfill gas has been industry best practice for many years. We ensure that flares or landfill gas power plants are operated to the correct standards to ensure effective combustion and the destruction of the trace gases found in landfill gas.

There will be some exhaust gases but these will be at concentrations that are very unlikely to present a risk to people's health. These emissions are monitored by the operator and the results are reported to us.

What about Carbon Monoxide and Hydrogen Sulphide?

Carbon Monoxide is monitored at the site within the emissions to air from the landfill gas power plant and flare. It is used as a measure to ensure that the landfill gas is fully destroyed. The emissions of Carbon Monoxide from the engines at Redhill Landfill are within the acceptable limits set out in the permit.

Hydrogen Sulphide is a trace gas that is found in landfill gas, this causes the 'rotten eggs' smell. The gas management system is used to collect and destroy Hydrogen Sulphide together with the other trace gases. Hydrogen Sulphide can be smelt at much lower concentrations than the level that can cause harm. So whilst you have smelt Hydrogen Sulphide in the air around Redhill Landfill it would have undergone significant dilution and would be very unlikely to directly impact human health.

Notifying us of odours

How do I complain about the smell from Redhill Landfill?

To report an incident, people can call our incident hotline on **0800 80 70 60** (free of charge, 24 hours a day).

This national call centre is directly linked to local incident responders. The information you give helps us assess the appropriate response so please do call us as soon as you start smelling an odour.

You can also contact Biffa Waste Management on 01737 765122 during office hours (8.30am – 5pm). Outside of these times Biffa have an answer phone where you can leave a message and someone will contact you within 24 hours.

Alternatively you can also email Redhill Landfill with your query at: general.enquiry@biffa.co.uk or at: amie.jenner@biffa.co.uk.

What information do I need to report?

When you contact us or the operator it would be useful if you can provide the following information:

- the time you smelt the odour, whether it's happening now and whether it's intermittent;
- where you smelt the odour;
- what it smells like; and
- how strong it is using this scale:
 - **0 - No odour**
 - **1 - Very faint odour**
 - **2 - Faint odour**
 - **3 - Distinct odour**
 - **4 - Strong odour**
 - **5 - Very strong odour**
 - **6 - Extremely strong odour**

How do I find out more about Redhill Landfill?

Biffa has a dedicated webpage for Redhill Landfill and also produces a regular newsletter which is available on their website. The link for the website is:
<http://www.biffa.co.uk/waste-processing/landfill/redhill-landfill.html>