

# STONEYHILL RESOURCE RECOVERY PARK AND LANDFILL SITE

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DEVELOPING A NEW WAY TO MANAGE ABERDEENSHIRE'S WASTE

JUNE 2011



Aberdeenshire residents produce around 150,000 tonnes of domestic waste a year. Of this, about 50,000 tonnes is recycled or reused, leaving around 100,000 tonnes going to landfill at Stoneyhill.

Landfill tax currently costs Aberdeenshire council taxpayers £56 per tonne, but this will increase by £8 per tonne per year, to £80 per tonne in 2014.

This is not sustainable and Aberdeenshire needs to develop a new way to manage waste so it can increase the county's recycling rate from 35 per cent to 60 per cent by 2020 and significantly reduce the amount of your waste it sends to landfill.

SITA UK, which has been awarded the contract to manage the treatment and disposal of Aberdeenshire's waste for the next 15 years, now plans to develop modern, sophisticated waste treatment facilities at Stoneyhill to help the county meet the Scottish Government's Zero Waste targets and avoid expensive taxes and potential fines.

We are holding a second set of exhibitions to enable members of the community to see our refined proposal for the Stoneyhill Resource Recovery Park.

The latest exhibitions will also provide information on a separate planning application we are proposing to submit to Aberdeenshire Council, which involves amending the closure date of the existing Stoneyhill landfill site from June 2012 to December 2024. You can read more about this application on the back page of this leaflet.

Your views are important to us. Please come along and tell us what you think, or contact us via email or telephone. We will be happy to answer your questions.

## PHOTO KEY



An elevated view of the proposed landscaped resource recovery park facilities, from a north east direction

## BENEFITS OF THE STONEYHILL RESOURCE RECOVERY PARK

- » Creates about 40 long-term jobs, and 200 short-term jobs during peak construction times.
- » Diverts around 70,000 tonnes of waste per year from landfill.
- » Generates enough electricity to power around 6,000 homes.
- » Creates the Stoneyhill Community Fund to assist local worthy projects.
- » Represents an investment in the county of about £60 million.
- » Increases recycling and composting by 20,000 tonnes per year.

## The exhibitions will take place at:

Red House Hotel, Aulton Road, Cruden Bay –  
Tuesday, 14 June 2011, 2pm to 7pm

Longhaven Hall, Longhaven –  
Wednesday, 15 June 2011, 2pm to 8pm

Telephone: 01224 249168

Email: [stoneyhill@sita.co.uk](mailto:stoneyhill@sita.co.uk)

Website: [www.sita.co.uk/your-environment/our-plans/stoneyhill](http://www.sita.co.uk/your-environment/our-plans/stoneyhill)



## Stoneyhill Resource Recovery Park

SITA UK will be submitting a planning application to Aberdeenshire Council this summer to develop two new hi-tech processing facilities at Stoneyhill, which is about 7 km south west of Peterhead. These are:

- » a mechanical biological treatment facility taking 80,000 tonnes of non-recycled household waste, with an in-vessel composting plant.
- » a gasification plant with a 60,000 tonne capacity.

The Stoneyhill site is well located for handling Aberdeenshire's household waste as more than 50 per cent of residents are based within 30 miles of the site. It is also well placed for transport links.

Waste is already going to Stoneyhill and would simply be diverted from the landfill to the new recycling and recovery facilities. It is envisaged that the landfill would continue to take waste unsuitable for recycling or recovery, thereby minimising the need for onward transport.

At our first exhibitions in March we asked you to give us your views on four possible design options for the buildings. The Landscape and Agricultural designs were both popular and following additional discussion with engineering and landscape specialists, the Agricultural design (shown below) was chosen.



*View of the proposed Stoneyhill Resource Recovery Park*

## MECHANICAL BIOLOGICAL TREATMENT

Mechanical biological treatment is a way of treating non-recycled waste in order to recover additional materials, such as metals and plastics, for recycling. It increases diversion from landfill and produces a compost-type material for use in land restoration projects.

The mechanical biological treatment facility would be designed to reclaim around 20,000 tonnes of recyclables and land reclamation materials from Aberdeenshire's residual (non-recycled) household waste and divert a further 30,000 tonnes from landfill.

## GASIFICATION

Gasification is a means of recovering energy from waste discarded by homes and businesses once recyclables have been removed.

The gasification facility could produce around 25,000 megawatt hours of electricity per year, enough to power around 6,000 homes. Some of this power will be used in the mechanical biological treatment process.

Gasification involves heating waste to a high temperature inside a sealed chamber. This is done in the near absence of oxygen, so organic materials in the waste do not burn but instead reform into synthesis gas – also known as syngas – which is predominantly a mixture of carbon monoxide, hydrogen and methane.

This syngas is then used as a fuel and is burned cleanly at high temperatures to provide heat energy. The heat is used to make steam and the steam drives a turbine to generate electricity, which is fed into the local grid.

## Your questions answered

### WHEN WE EXHIBITED IN MARCH, THE MOST FREQUENTLY ASKED QUESTIONS WERE:

#### Will the resource recovery park be safe?

Facilities such as these are strictly monitored by the Scottish Environment Protection Agency (SEPA) and Health Protection Scotland and are not permitted unless they comply with tough and legally-binding European and Scottish regulations designed to protect public health and the environment.

#### How will harmful emissions be prevented?

The principal outputs will be nitrogen, with some steam, carbon dioxide and oxygen. However, gasification produces similar substances to any other energy from waste process.

All stack emissions for these facilities must be regulated at or below the emission limits set out in the Waste Incineration Directive (WID) – robust legislation designed to protect health and the environment. The Air Pollution Control system of the facility would filter out potentially harmful substances to meet these stringent limits and emissions would be monitored continuously throughout the life of the facility.

#### How will odour be controlled?

The facilities will be contained inside one fully enclosed building and all the processes involved are indoors and operated under controlled conditions. Air from within the building would be drawn into the gasification process or through the bio-filters, designed to eliminate odours from the composting process.

#### Will Aberdeen City's waste go in the resource recovery park?

The resource recovery park has been sized and designed to take Aberdeenshire's waste and has very little spare capacity to take anything else. Aberdeen City's waste is currently disposed of at Stoneyhill landfill and this will continue until Aberdeen City Council has decided upon an appropriate alternative solution.

### TRAFFIC AND TRANSPORT

On average between 70 and 80 waste loads are delivered to Stoneyhill landfill site per day. There are also roughly four to six road tankers removing leachate (liquid) from the site and taking it for treatment elsewhere.

The development of the resource recovery park would result in half of the waste loads currently coming into the site simply unloading at the new facilities, rather than at the landfill.

The only additional traffic created by the new park would be vehicles taking recyclable/reusable materials, as well as the Air Pollution Control Residue (APCR), off-site – meaning only three additional loads would leave the site each day (seven if and when the bottom ash was transferred off-site for recycling).

Waste would only be transported during the same hours as permitted for the existing landfill site.

### PROTECTING THE ENVIRONMENT

As part of the planning application process, SITA UK has to undertake an Environmental Impact Assessment, which looks at the potential impacts of the proposals on population, fauna, flora, soil, water, air, climate factors, heritage and landscape.

The results of this assessment are being fed into the design of the facility to ensure that any effects are appropriately mitigated. The results of the assessment, together with mitigation measures proposed, are collated in an Environmental Statement, which will be submitted to Aberdeenshire Council with the planning application and will be available for public scrutiny.



*Aerial view of Stoneyhill*

## Stoneyhill landfill site

SITA UK has submitted a Proposal of Application Notice (PAN) to Aberdeenshire Council to amend the end date of its current landfill operations at Stoneyhill from June 2012 to December 2024.

This application does not change the approved landfill scheme; it simply requests more time in which to fill the existing consented site. It is our intention to listen to feedback from stakeholders before submitting a full planning application in autumn 2011.

Filling this space will ensure the final landform is as originally planned, and will minimise the long-term maintenance required for the site, while also improving drainage and the efficiency of leachate and landfill gas management systems.

Thanks to improved recycling initiatives, new waste treatment facilities and better public awareness, the type of waste being disposed of in landfill is changing and decreasing, and will continue to do so.

However, it is accepted by the Scottish Government that landfill will still play an important role in the treatment and disposal of waste for some years to come, and landfill space will continue to be required in Aberdeenshire.

Assuming current input rates are maintained, Stoneyhill landfill will take a further 12 years beyond its permitted life to reach approved final levels.



*Capped and restored area at Stoneyhill landfill*

## MANAGING STONEYHILL LANDFILL SITE

SITA UK acquired the Stoneyhill landfill site in 2008 and takes its responsibility as a landfill operator very seriously, investing significantly in the facility.

In order to reduce the risk of odours, it is important in the operation of a landfill site to keep the exposed operational areas to a minimum. When SITA UK took over three years ago, there were no areas capped or restored, so a programme of capping was quickly initiated.

During 2008 and 2009, 32,000m<sup>2</sup> of the site was permanently capped, and in 2010 a further 34,500m<sup>2</sup> was capped with soils put in place over the capping layers and grass cover established. A temporary cap has also been placed over areas that cannot yet be brought up to final level. During 2011, the intention is to bring as much of the southern end of the landfill to final levels, so that it can be capped and restored in 2012.

Since taking over the site, SITA UK has also made substantial investments to improve the gas management system on site, resulting in increased renewable power generation and a reduction in odour complaints.

## THE FUTURE ROLE OF LANDFILL

In June 2010, the Scottish Government published its Zero Waste Plan stating its aim to make the most efficient use of resources to reduce the amount of waste sent to landfill. To achieve new Government targets significant amounts of infrastructure needs to be developed to divert waste away from landfill. Naturally, this will take time and during this period landfill will remain the primary disposal route for residual waste.

## IF YOU HAVE QUESTIONS, PLEASE CONTACT US:

Martin Cracknell, SITA UK, Strategic Development Manager

Tel: 01224 249168

Email: [stoneyhill@sita.co.uk](mailto:stoneyhill@sita.co.uk)

Website: [www.sita.co.uk/your-environment/our-plans/stoneyhill](http://www.sita.co.uk/your-environment/our-plans/stoneyhill)

