Providing a service we can be proud of

Veolia Environmental Services safely operates waste management facilities in 33 countries worldwide. In 2007 we recycled 10 million tonnes of waste, created 1 million tonnes of compost and recovered enough energy to provide electricity to 8 million homes. We are respected for our approach to protecting the environment. We strive to beat targets set by the Government and other regulating bodies in relation to environmental legislation. We operate 6 Energy from Waste Facilities in the UK and 66 worldwide. With a great deal of expertise and a professional approach we ensure the facilities we manage operate efficiently and with respect for the environment.

Architecture

The aim has been to focus on creating a high quality innovative design for the proposed facility from every angle that reflects the context of the industrial surroundings with the neighbouring rolling countryside and the view point from the Battlefield Heritage site. The design is a combination of rural influence with sleek modern design. The building height will be below 30 metres, with a chimney height of 65 metres from the ground. There will also be a Visitor Centre.

Community engagement with Veolia Environmental Services

In April 2008 Veolia Environmental Services set up a Community Liaison Group for this facility. The Group has a wide cross-section of membership from the local area. It represents many organisations and community groups from within your local community.

These include parish councils, community organisations and local groups, a local school, an environmental group and the local action group. All the issues were examined by the Community Liaison Group in detail with the relevant specialists, and members asked many questions and expressed their views. To find out more visit our website at **www.veolia.co.uk/shropshire**

The full Planning Application will be made available to view at Shropshire County Council, Shirehall, Abbey Foregate, Shrewsbury, Shropshire, SY2 6ND.

Details of the Planning Application are also on our website.

To purchase copies of all the application documents as a hard copy or to receive a free CD version and to find out more visit: **www.veolia.co.uk/shropshire**

VEOLIA ENVIRONMENTAL SERVICES

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ENERGY FROM WASTE FACILITY, BATTLEFIELD ENTERPRISE PARK

Summary of proposals and results of studies

www.veolia.co.uk/shropshire

VEOLIA ENVIRONMENTAL SERVICES

Our waste

Shropshire residents produce around 1.25 tonnes of waste per household in a year. Currently most of the waste goes to landfill sites, but these are filling up fast and we are running out of space to bury our rubbish. Councils, and hence council taxpayers, will face fines of up to £150 per tonne of rubbish landfilled over a set quota. In Shropshire we are recycling and composting more household waste than ever before but we can and must do more to minimise landfill.

In particular biodegradable waste, such as food and garden waste, going to landfill is harmful to the environment because it produces methane – a greenhouse gas 21 times more potent than carbon dioxide.

The Strategy – creating a more sustainable Shropshire

The strategy for this waste management contract is to improve waste services across the area. Recycling will be maximised by increased expansion of the kerbside collection scheme, improvements to existing Household Recycling Centres and two new Household Recycling Centres, together with Transfer Stations to maximise recycling and transport efficiency. A new enclosed composting facility will process green garden waste and food waste and a state-of-the-art Energy from Waste Facility will be built to produce energy from the remaining (residual) waste. These measures will reduce the amount of household waste that will be sent to landfill from over 62% to 5% by 2015.

Proposals for the key infrastructure improvements to achieve recycling and composting targets are now well underway. But ahead of the impending landfill fines and with little landfill capacity available in Shropshire it is now vital that a facility to achieve the landfill diversion targets for residual wastes is secured as soon as possible. The Energy from Waste Facility will contribute significantly to reducing landfill and help towards supplying greater energy security for the UK.

The Planning Application

Veolia ES Shropshire Limited is submitting a planning application to Shropshire County Council to build an Energy from Waste Facility on a site adjacent to the existing Household Recycling Centre and Transfer Station at Battlefield Enterprise Park, Vanguard Way, Shrewsbury. This leaflet is a summary of the proposals.

What is an Energy from Waste Facility and why do we need it?

An Energy from Waste Facility uses rubbish which is not separated for recycling or composting to generate energy whilst reducing the waste volume by 90%. The remaining ash can be recycled as a construction material. The facility proposed would be able to process about 90,000 tonnes a year of residual waste, generating enough electricity, to power about 10,000 homes. Shropshire still needs to consistently achieve high recycling rates in order to achieve the goal of only 5% landfill. This facility is designed to complement and not compromise recycling and composting.

The benefits are:

- To provide a proven and safe means to handle rubbish from Shropshire that is not recycled or composted.
- To landfill as little as possible (5%) and meet Government and European legislation as set out in the Landfill Directive.
- To meet the targets set in line with the Government's commitment to reduce, reuse, recycle and recover.
- To produce more electricity for the UK, by harnessing waste as a useful fuel and so reducing the need to import and use fossil fuels.
- To create up to 180 jobs during the construction and 21 additional permanent jobs once operational.

Different countries manage their waste in different ways. Currently, the UK and countries such as Portugal, Greece and Italy send a large amount of waste to landfill.

In other parts of Europe such as Sweden, Denmark and the Netherlands there is a more balanced and sustainable mix, with significantly greater recycling and greater recovery of energy from waste. Energy from waste forms an important component of the waste management strategy of these countries. This reduces the amount of waste going to landfill. In time we want to achieve a similar balance in Shropshire.

Climate Change

Climate change is a fundamental international concern – as our planet's ambient temperature changes so does our climate, and this is likely to have serious consequences, for example, in terms of food production and natural disasters.

There are many contributing factors to global warming both natural and man-made. Energy from Waste Facilities have significantly lower greenhouse gas emissions than disposal to landfill and are therefore beneficial to the environment compared to landfill. Landfill produces methane which is 21 times more potent a greenhouse gas than carbon dioxide, the gas produced from combustion.

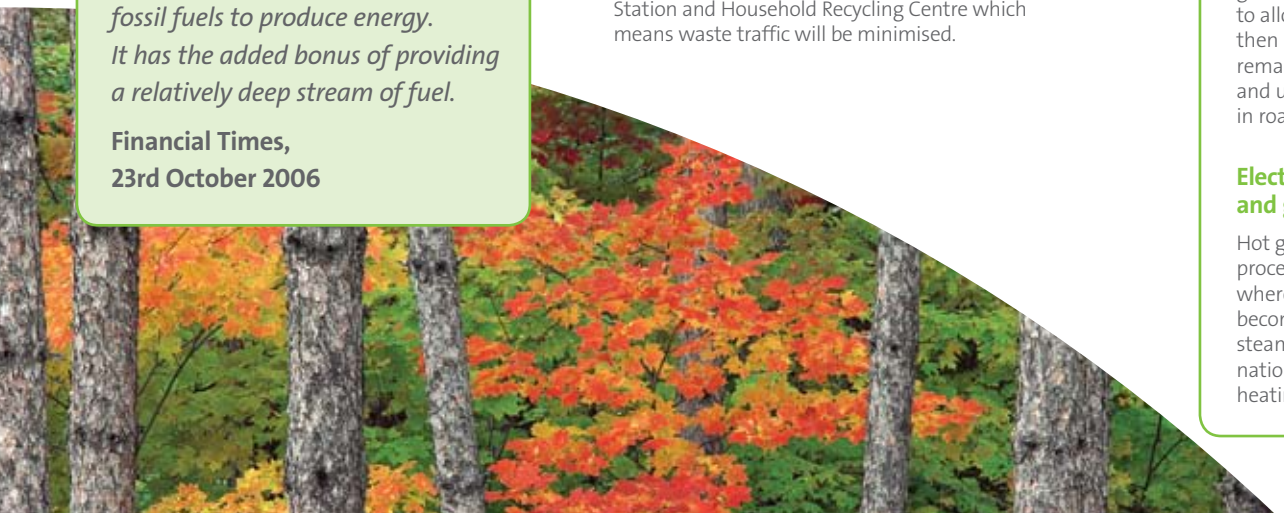
Energy generated by these facilities offsets the production of energy elsewhere – therefore displacing other emissions. An additional benefit of energy from waste is that 60-70% of household waste is 'biomass' and therefore the energy produced from this fraction is considered by climate change experts to be "carbon-neutral".

Converting waste into energy solves two problems at once: it diverts rubbish from landfill sites: and it reduces greenhouse gas emissions because it avoids the need to burn fossil fuels to produce energy. It has the added bonus of providing a relatively deep stream of fuel.

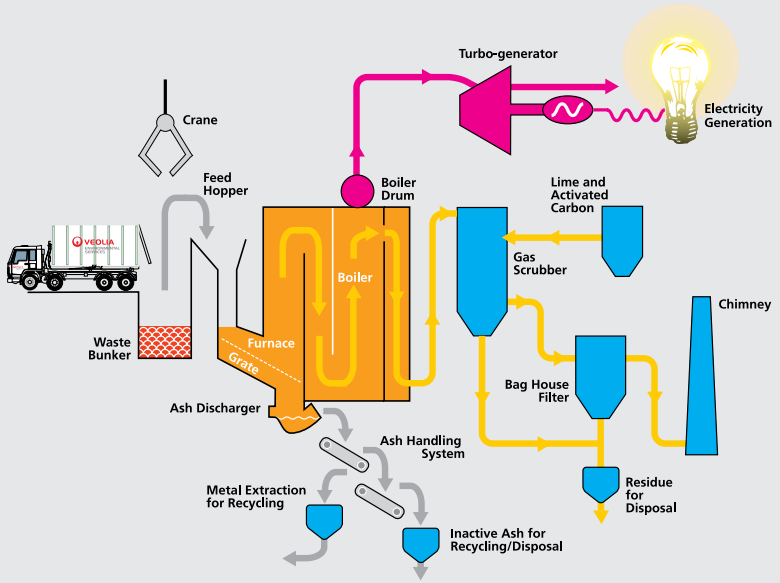
Financial Times, 23rd October 2006

Why at Battlefield, Shrewsbury?

- It is situated close to where most of the waste is generated in the County, reducing vehicle miles and therefore costs and emissions from the collection of the residual waste.
- There are excellent road links to the site.
- The site is adjacent to an existing Waste Transfer Station and Household Recycling Centre which means waste traffic will be minimised.



The process – how it works



Waste not segregated for recycling or composting by residents is collected and transported to the Facility, where it is deposited into a bunker. A crane grabs the waste and places it into the feed hopper where it passes down onto the combustion grate. The action of the grate turns the waste to allow it to burn fully. The resulting ash then has metals extracted for recycling. The remaining ash is then sent for reprocessing and use as an aggregate substitute principally in road construction.

Electricity production, heat usage and gas cleaning

Hot gases produced in the combustion process pass through a water-tube boiler, where they are cooled; the heated water then becomes steam. A turbo-generator uses the steam to produce electricity for export to the national grid. Should a viable outlet for district heating be identified in the future then heat can be produced for local heating schemes. Veolia is actively engaged in assessing the opportunities for this within the local area.

As with any combustion process, such as burning fuel to power your car or heat your home, emissions are released. However, the facility will have an extensive flue gas cleaning process ensuring only gases which meet strict emission regulations are released to the atmosphere, and these will be monitored.

How the cleaning works – Gases from the boiler first go through a gas scrubber, where lime milk is injected to neutralise acid gases; activated carbon is then added to remove other pollutants; and finally a filter removes particulates and dusts. This process produces a small amount of residue, which is exported from site in sealed containers for processing and reuse or to a licensed disposal facility for this type of waste. The cleaned gases are finally released to the atmosphere through the chimney.

Regulating the Facility

Veolia Environmental Services will shortly submit an Environmental Permit Application to the Environment Agency, the government agency which ensures that emissions of potentially polluting substances are controlled to a safe level.

The parallel processing of the Planning and Permit applications allows efficient consultation and assurances about the technical aspects of the facility. In addition to this, the facility must also meet the European Union's strict criteria in the Waste Incineration Directive and Veolia Environmental Services must comply with the stringent emission controls which will be monitored by the Environment Agency for the life of the facility.

Specialist Studies

For the Environmental Statement which accompanies the Planning Application, detailed studies were undertaken by independent experts. Some of these studies are summarised below.

What the experts say:

"Modern, well-managed waste incinerators will only make a very small contribution to background levels of air pollution. Air-monitoring data demonstrate that emissions from the incinerators are not a major contributor to ambient air pollution."

UK Health Protection Agency

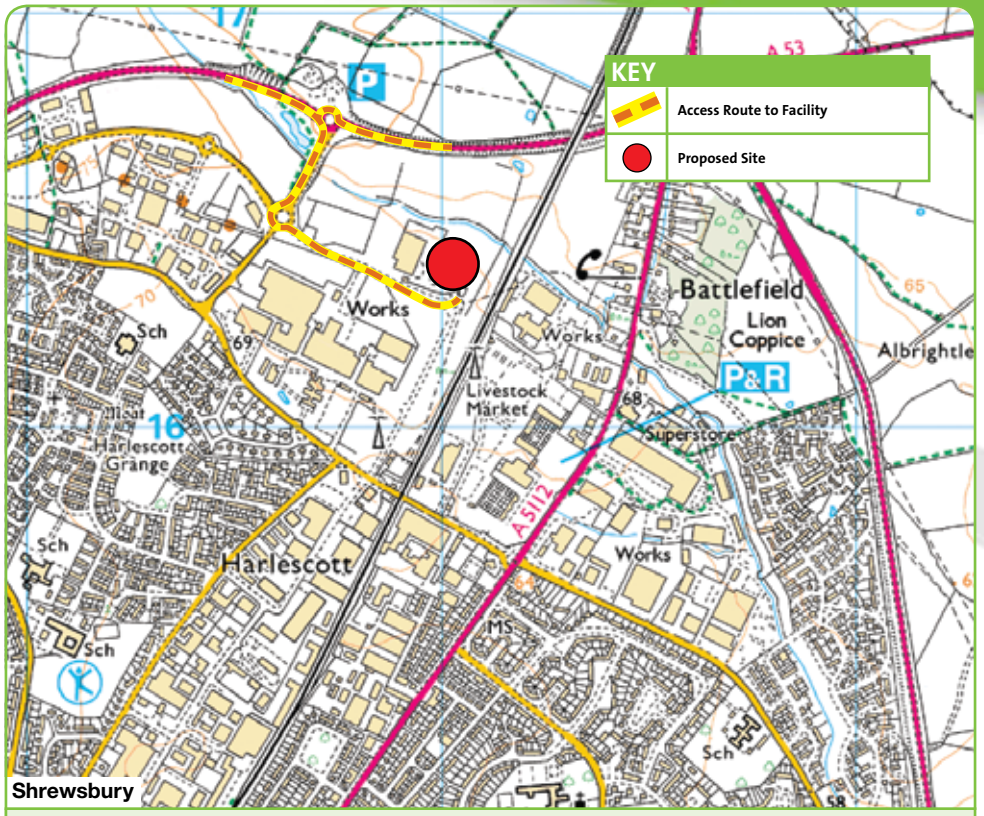
What the experts say:

"The Review did not find a link between the current generation of municipal solid waste incinerators and health effects" as stated in the Department of Environment, Food and Rural Affairs "Health Effects of Waste Management" report.

Air Quality and Health

A comprehensive study was carried out to assess the existing air quality conditions. Emissions from the proposed facility were identified and the maximum permitted concentrations were used as inputs to air quality at ground level. The study took into account various factors including climate and landform. Existing and predicted concentrations were compared with air quality standards set by the European Union, the World Health Organisation and the Government to protect human health. The study concluded that with the facility operating, air quality at ground level would be well within standards set to protect human health.

A Health Risk Assessment has also been undertaken, in line with the precautionary principle. It is based on determining the maximum possible risk to any person. To do this it presumes a set of worst case scenarios – such as the proposed facility operates at its maximum allowable emissions, and that a person lives their whole life in the area of maximum influence consuming significant amounts of food produced in the area. As unlikely as this 'worst case' situation is, the assessment concluded that the Energy from Waste Facility is safe and will not contribute additional risk to anyone's health in terms that could be considered significant.



Transport

Currently waste is delivered to the existing Waste Transfer Station directly from Shrewsbury and Atcham Borough Council and North Shropshire District Council areas. Also bulk haulage vehicles pick up recyclables and residual waste from the Household Recycling Centre and Transfer Station which is then delivered to reprocessors or to available landfill. In total the current HGV activities using the site vary between 55 to 87 arrivals per day during Monday to Friday.

With the proposed new facility, residual waste would be delivered, either directly to or via Transfer Stations within the county, to the Energy from Waste Facility and not to the existing adjacent Transfer Station. Recyclable and compostable materials will continue to be delivered to the existing Transfer Station and these materials will continue to be loaded onto vehicles and delivered to reprocessing facilities. Ash residues from the Energy from Waste Facility process will be taken off site to suitable reuse or disposal facilities.

Due to increased kerbside recycling, HGV arrivals will increase over the years from 77 arrivals per weekday in 2013 to a peak of 83 in 2022 with the existing facilities.

With the proposed Energy from Waste Facility in place the additional traffic in a worst case scenario would be only 11 extra HGV arrivals per day. However this could be reduced further by back-loading vehicles – i.e. making sure HGVs arrive full and leave full, which could reduce it to only one extra HGV arrival per day.

By comparison at the Household Recycling Centre the amount of visitor arrivals are usually around 692 per day and can be up to 1100 on a Bank Holiday.