

# Community Information Day

## Proposed EfW Facility, Old Kiln Quarry, Chieveley

### Your Questions answered

Chieveley Energy from Waste

#### What is an EfW Facility?

EfW is one of the processes using the residual waste left over after recycling as a fuel for sustainable energy production.

The energy produced by the combustion of the waste (or by using the waste as a fuel) can be used to generate electricity by producing steam to drive a turbine, or it can be recycled to heat nearby buildings.

#### Is there a need for EfW here?

Yes. Grundon has carried out an extensive study of the current and forecast waste arisings in Berkshire, and the way waste is handled, treated or disposed of at present. The study highlighted a significant gap between the quantity of residual waste requiring treatment in Berkshire, and the treatment capacity available.



A visualisation of the proposed Chieveley EfW facility

Berkshire is heavily reliant upon landfills within and outside of the County for the management of its residual waste. With the imminent closure of its remaining landfills and no potential new landfill sites, it will need to export all of its residual waste, unless capacity can be provided within the County.

Landfill is not a sustainable way forward and the EfW facility would not only reduce our reliance on landfill and subsequently reduce harmful greenhouse gas emissions but would also provide clean, green, renewable energy for approximately 30,000 homes.

The proposed EfW facility will predominantly deal with residual commercial and industrial waste arising within Berkshire. Whilst municipal waste in West Berkshire is currently being managed by Veolia, the new facility will be capable of treating the residual part of the waste if required, ensuring that municipal waste arising within West Berkshire is treated within West Berkshire, instead of being exported elsewhere.

#### Will you be taking rubbish away from recycling?

No – only waste that can not be recycled would be used. This waste would otherwise end up at landfill and contribute to the emission of harmful methane gases.

#### Is the waste being burnt harmful?

No – no toxic waste would be burnt here. Toxic waste is dealt with at specialist facilities.

#### Is it safe?

Yes - Modern, purpose designed EfW plants operate within an Environmental Permit issued by the Environment Agency. A continuous monitoring regime ensures they comply with strict environmental guidelines and the results of this monitoring can be made available to view online. Grundon's EfW facility at Colnbrook is the UK's most modern EfW plant and successfully delivers energy generation while also meeting the strict operational and environmental guidelines.

The emissions to atmosphere are tightly controlled and minimal.

For the proposed EfW plant, the impact of most pollutants can be screened out as insignificant against the EA criteria. For those which cannot be screened out, the impact is described as negligible against the Environmental Protection UK (EPUK) criteria.

A further standard air quality model has been used to assess any predicted impact on human health. The output from the model demonstrates that these are negligible in the context of accepted Tolerable Daily Intakes.

#### What about these PM2.5s and nano particles people talk about?

Some people are concerned that EfW facilities emit harmful quantities of ultra fine particles. These particles are referred to by their size, measured in microns. Those most commonly cited are PM10 and PM2.5. Very small particles are created whenever a combustion process occurs. Indeed PM2.5 (and smaller) particles are created naturally – eg beside the seaside. They are in the air around us and we breathe them in (and out) all the time. Energy from waste is not a major source of these particles and the gas scrubbing systems at modern plants effectively remove more than 99.9% of all particulates. To put this all in context, the largest source of PM2.5 in the UK is road traffic (44%) while all waste management processes account for only 7% – and EfW is only a fraction of that.

#### Will we be disturbed by noise?

All noise – including that from traffic generated by the proposed development during construction as well as operation – would fall within nationally and locally acceptable guidelines. Those residential properties closest to the site (Kiln Drive) would not experience any unacceptable noise disturbance as a result of the development.



By Appointment to  
Her Majesty The Queen  
Waste Management  
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### Will roads be able to cope with the additional traffic?

Predicted lorry movements would be 78 entering and 78 leaving the site each day. In addition to these there would be 35 staff cars entering and leaving the site each day.

As the only vehicular access point is through the Chieveley services by the A34/M4 junction we would anticipate the vast majority of vehicles would use these key transport routes. No transport would come through Hermitage and Curridge as there is no access to the site from this area. There would be no real impact on the A34/M4 junction and our highway consultants predict the proposals would have less than a 1% impact on the junction.

### Will there be smoke?

Much of what comes out of the chimney (stack) is not smoke at all. It is condensed water as steam and it is not really visible except on cold days. Everything that is discharged has already been treated to remove potentially harmful substances and all emissions are monitored continuously to make sure the site is safe.

### Will it smell?

No – all waste is contained within the tipping hall and careful air circulation would ensure that smells remain within the building.

### What happens to the ash produced?

There are two main types of ash left over after the combustion process – bottom ash and air pollution control (APC) residues. The bottom ash is what remains after the combustion process is complete. It is not hazardous and can be recycled in a variety of ways, mainly as an aggregate for road building or block making. It is proposed that lorries would transport this bottom ash off site for recycling at a specialised site.

APC residues are the materials captured by the pollution control equipment. They are classified as hazardous only because they are very alkaline, due to the injection of lime in the gas scrubbing process. It is proposed that these are treated on site in one of the two pods to make them safe. Plasma technology or an alternative suitable technology may be used to treat this. The final product once treated is similar to glass.



A visualisation of the proposed Chieveley EfW facility

### How many homes could be powered by the energy produced?

Approximately 30,000 homes.

### Are you using the heat by-product?

The facility will have the option in the future to use the heat by-product. This could be used to provide low pressure steam, hot water, space heating or even refrigeration for use in local industrial or domestic buildings.

### What about the North Wessex Downs Area of Outstanding Natural Beauty (AONB)?

We accept that the site falls within the AONB. It should be noted that development is not prohibited within an AONB and we feel that given the close proximity to the existing developed Chieveley Services area and the A34/M4 junction, the excellent transport links this offers and the regional (Berkshire wide) importance that a facility such as this offers, an argument for a facility on this site can be made. In addition extremely careful consideration has been given to the proposed design, taking advantage of the already worked land that is 10m lower than the surrounding ground levels, and creating a curved building profile to reflect the undulating landscape that surrounds the site.

### What would the facility look like from key viewpoints in the area?

Extensive studies have been undertaken by a landscape architect, which have also involved the flying of blimp balloons at the proposed building and stack heights and creation of visualisations from key viewpoints in the area. These visualisations can be found in booklets available for your perusal here today. Please take the time to look at the viewpoint location map at the beginning to find out which viewpoints are most relevant to you.

It should be stressed that the reduction in stack and building heights from the original consultation in February 2011 has reduced the area from where the proposals would potentially be seen, in particular from the south-east.



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