

Proposed Energy Recovery Facility (ERF), North Quay, Newhaven

Frequently asked questions

1. What role, if any, did Onyx play in the development of the Waste Local Plan?

Onyx was not involved in the development of the Waste Local Plan. The plan had been in draft for some years before Onyx tendered for and secured the integrated waste management services contract. The draft Waste Local Plan provided guidance to Onyx in tendering for the contract.

2. Why is a new Energy Recovery Facility necessary? Why can't we just rely on composting and recycling to manage our waste?

The reality is that doing nothing is not an option. Landfills in the area are filling up at an alarming rate. Up until now we have relied heavily upon landfill for waste disposal but this is the least preferred disposal option on environmental grounds. It is a government requirement to reduce the amount of household waste that goes to landfill and local authorities throughout the country will be required to meet set targets and could face fines if they do not achieve them. Onyx is committed to meeting challenging recycling targets and is also developing a composting facility. However, recycling and composting cannot reduce reliance on landfill sufficiently even in the longer term.

3. What is being done to increase recycling and composting?

Household waste is currently collected for recycling or composting and this will continue to increase as the public separates out more and more. As part of the waste management strategy for East Sussex and Brighton & Hove and the integrated waste management service contract, Onyx is providing the infrastructure and operations to expand the processing of recyclable and compostable material across the county. This will involve upgrading and/or developing new Household Waste Recycling Sites, developing a Materials Recovery Facility for recyclables and a Composting Facility for green garden waste, as well as transfer stations. What is not reused, recycled or composted will be recovered through the ERF with the exception of a small amount of waste that will continue to go to landfill.

4. How much waste will be burned in the ERF when it is operational? What percentage of the total waste generated across the area does this represent?

The facility will process 210,000 tonnes of waste a year. This currently represents just over 50% of the household waste in East Sussex and Brighton & Hove. This percentage will reduce if the amount of household waste continues to grow at current rates. High levels of recycling and composting will still therefore be required.

5. Will the ERF prevent the development of recycling?

No. This facility is specifically designed around achieving high levels of recycling and composting and is designed to complement and not compromise them. Onyx is contractually obliged to increase recycling and composting rates significantly, via the area's Household Waste Recycling Sites, a proposed materials recovery facility and a proposed composting facility. Any recyclable or compostable waste delivered to these facilities will therefore be recycled or composted and the ERF will process only

the remaining waste which householders have not separated out for recycling or composting.

Onyx is one of the largest providers of post-consumer news papers and magazines to the newsprint paper mills in the country and operates some of the most successful materials recovery collection and sorting facilities in the UK.

6. Are there health risks from the facility?

The combustion of waste in an energy recovery facility is a safe, efficient and modern way of treating waste that cannot be recycled or composted, with the additional benefits of generating electricity and reducing our reliance on landfill and on fossil fuels.

A health risk assessment has been undertaken by air quality consultants and is based on the maximum possible risk to any person. It has concluded that there would be no discernible increase in health risk from the energy recovery facility. Work carried out by the government, such as DEFRA's "Health Effects of Waste Management" report, has also demonstrated this to be the case.

7. How are emissions from the ERF controlled and what are they?

An IPPC (Integrated Pollution Prevention Control) application must be submitted by Onyx to the Environment Agency. This is a statutory regulation which is enforced by the Environment Agency to ensure that emissions are controlled to a safe level. The IPPC application must be approved before the facility can operate.

The IPPC regulations set strict limits for emissions. The main emissions from the chimneys would be carbon dioxide and water vapour, with minimal amounts of oxides of nitrogen, trace elements, heavy metals, dioxins and particulate matter. To ensure that emissions comply with these regulations the ERF will employ a sophisticated gas clean-up system.

8. How is the ERF monitored?

Onyx will monitor the majority of emissions from the facility on a continuous basis. Other trace emissions are required to be monitored by sampling; this will be carried out at regular intervals. The emissions data will be logged and stored and reported to the Environment Agency. It will also be available on the Onyx South Downs web site www.onyxsouthdowns.co.uk. Emissions will be subject to strict control in accordance with the Integrated Pollution Prevention Control regulations which ensure that any pollution is controlled to a safe level. The Environment Agency will act as an independent monitor of the facility's outputs and if limits are breached, it will have powers to shut down the facility and impose fines accordingly. Onyx has an excellent track record of compliance with emissions regulations. The emissions data for its three ERFs currently operating in Hampshire can be viewed online at www.hws.co.uk

9. Why does the ERF have to be in East Sussex - couldn't it be built elsewhere?

It is being built in East Sussex to meet two of the Government's waste objectives:

- that communities should take more responsibility for their own waste ('self-sufficiency'); and
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- that waste should be disposed of at one of the nearest appropriate installations ('proximity').

For the same reasons no waste from outside East Sussex and Brighton & Hove will be processed on the site.

10. To what extent has Onyx identified alternative sites for the ERF?

East Sussex County Council and Brighton & Hove City Council undertook an assessment of potential sites as part of the Waste Local Plan preparation. Onyx also commissioned its own alternative site assessment to refine and update the selection process. Onyx's consultants looked at 336 potential sites in East Sussex and Brighton & Hove. These sites were assessed against a series of operational, planning and environmental criteria to determine their suitability for development. This process ultimately identified North Quay, which is also the area identified in the Waste Local Plan, as the most suitable location.

11. What is the relationship between the County Council and Onyx?

East Sussex County Council and Brighton & Hove City Council as Waste Disposal Authorities signed a 25 year contract with Onyx on 31 March 2003, for the delivery of an Integrated Waste Management Services Contract. Onyx is responsible for securing sites, obtaining planning permissions and constructing and operating facilities to deal with the growing problem of household waste in East Sussex and Brighton & Hove.

12. Given that the County Council has contracted Onyx to deliver a waste management service, how can we believe that it is independent in considering the planning application?

All County Councils and Unitary Councils have two independent roles as statutory waste disposal authorities (WDAs), and as statutory waste planning authorities (WPAs). These two functions are kept strictly separate. The WPA will decide based on planning grounds whether to grant or refuse permission for the ERF and will deal with the planning application legally and robustly.

13. When will the ERF be operational?

This will depend on the time it takes to secure planning permission and Environment Agency authorisation. However, using the most realistic estimates, the facility would be fully operational in 2009.

14. How much electricity will be generated by the ERF?

The facility will export 16.5 MW (megawatts) of electrical energy. This will be supplied to the electricity distribution network and is enough to power more than 16,500 homes. Producing electricity in this way does not rely on the use of fossil fuel, helping to protect precious resources.

15. Why is the ERF being built on a flood plain? I thought that this was against normal planning regulations.

Building on a flood plain is permitted and special precautions will be taken to avoid the risk of flooding. In this particular case, after consultation with the Environment Agency, we have designed the facility to cope with a 1 in 200 year flood.

16. What will be the impact on traffic movements of the new ERF when it's operational?

The proposed development will generate traffic mainly between Monday and Friday with a maximum of 224 lorry and 40 car trips on a weekday. (A trip is a one way journey either to or from the facility). The capacities of the local roads and junctions have been fully assessed by independent consultants who have concluded that this increase can be accommodated well within them.

During AM and PM rush hours there will be 16 and 19 trips an hour respectively. The maximum number of trips of 45 an hour will occur outside rush hour between 9am and 10am. Background traffic counts at the A26 New Road/Drove Road junction have been predicted at the AM and PM rush hour to be 722 and 793 trips an hour on average respectively, and 640 trips between 9am and 10am. The proposed development therefore represents an increase in traffic flow of less than 2.5% at rush hours and only 7% during the hour when the facility generates most traffic.

17. How big are the lorries which would be used by Onyx?

They will be bigger than Refuse Collection Vehicles (or dustcarts) and are around the same size as a supermarket articulated lorry. They can carry about 24 tonnes and will have a maximum road weight of 44 tonnes.

18. At what times during the week will the facility be operational?

It will operate 24 hours a day, seven days a week. Household waste is collected on week days so therefore the majority of vehicle movements will occur Monday to Friday between 9.00am and 5.00pm.

19. By what route will the waste be transported to the facility?

Other than local refuse collection vehicles, lorries will travel along the A26 to and from the site. This will be part of a routing agreement that would be put in place.

20. Who will own the ERF when the contract comes to an end?

Once the ERF is built and up and running, East Sussex County Council and Brighton & Hove City Council will own it and Onyx will operate it during the life of the contract.

21. Why does the chimney need to be 65 metres high?

Specialist consultants have determined the most suitable height for the chimney on the basis of establishing air quality conditions which are compliant with Government and World Health Organisation standards and guidelines. This has been done using latest dispersion modelling technology, taking into account factors such as the topography of the surrounding land, plant emissions, existing local air quality and weather conditions.

22. Is the ash produced by the ERF toxic? Are there health implications or environmental implications in its disposal?

There are two types of material referred to as 'ash'. By far the largest amount is known as bottom ash: this material is virtually sterile and is the main product of combustion. It will have the metal content removed for recycling and then be processed into an aggregate substitute for use in the road construction industry.

The other type of 'ash' is the residue which results from the facility's flue gas treatment. This is classified as hazardous as it is an irritant if mishandled. As such, this material will be transported in a sealed tanker lorry and disposed of at an appropriately licensed site for disposal, or used as a neutralising agent in the chemical industry. The amount of this material is very small – typically 3% by weight of the total waste processed.

23. Does the Energy Recovery Facility produce an odour?

No. All combustion air is drawn from the bunker area and therefore controls any risk of odour by maintaining a slight negative pressure in that area. The emissions from the chimney are odourless.

24. What measures are being taken by Onyx to consult and inform local residents?

Onyx has established a local consultation group. This group was set up to provide information and create a dialogue with local people. Meetings were arranged from January 2005 for local people and local interest groups to find out about waste management generally, and in particular, the plans for North Quay as they developed. The aim has been to provide members with the opportunity to feed in local views and concerns, to enable these to be carefully considered and, where practical, taken on board.

Other communications are to include:

Leaflets and updated information on our web site which clearly explain and summarise our proposals. Key planning application documents will also be added to the website, and the full application will be available from Onyx on CD.

An invitation for local residents and groups to visit an operational Energy Recovery Facility.

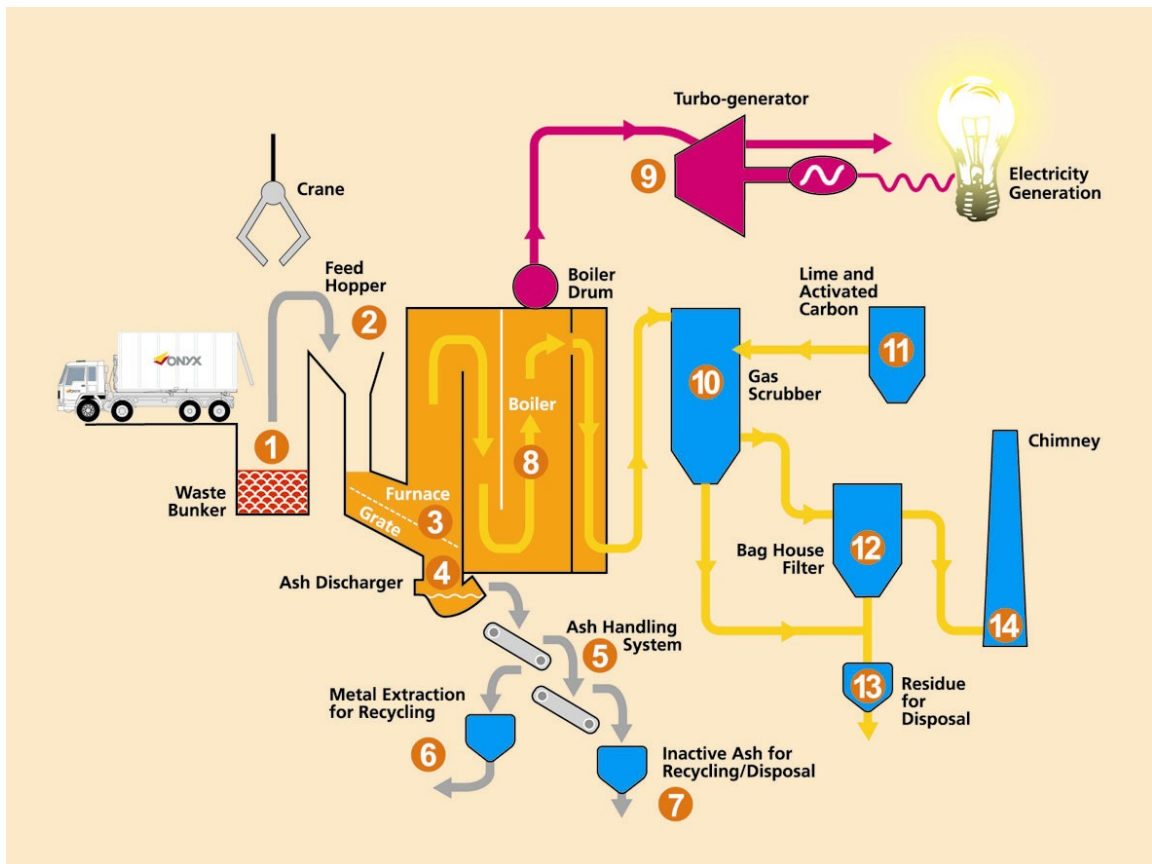
A leaflet drop to local residents informing them of our proposals and providing summary information and points of contact.

An exhibition in Newhaven manned by Onyx staff, which will be advertised. It will give local residents the opportunity to find out more about the development, by answering individual questions and providing them with open and honest information focusing on the issues that will concern them.

Broader communications work is also being undertaken which aims to raise awareness of all the waste issues facing everyone throughout the area, and the role householders can play to reduce, reuse and increase recycling.

In addition to the above, the planning application will be subject to a statutory consultation process and Lewes District Council will be one of the statutory consultees.

25. How does an ERF work?



Collection and Combustion

Recyclable and compostable material is separated by each household, collected via kerbside recycling schemes or the network of Household Waste Recycling Sites and then processed for recycling. Remaining waste is processed at an Energy Recovery Facility where it is tipped into a bunker (1) within the waste reception hall, where a crane places it into a feed hopper (2). It then passes down a feed chute onto the grate (3). The action of the grate turns the waste to allow it to burn fully. The burnt out ash passes through the ash discharger (4) onto an ash handling system (5), which extracts metals for recycling (6). The remaining ash is sent for recycling within the construction industry or for disposal (7).

Electricity production and air pollution control

Hot gases produced in the combustion process pass through a water tubed boiler (8) where they are cooled; the water heated by the gases then becomes steam. A turbo-generator (9) uses the steam to produce electricity both for the facility's consumption and for export to the local electricity distribution Network. There is also the potential for making steam or hot water available for district heating.

The gases from the boiler go through an extensive flue gas cleaning process. This consists of a gas scrubber (10) where the acid gases are neutralised and activated carbon (11) is added to remove other pollutants, and finally, a bag house filter (12) which removes any remaining particulates. The resulting residue (13) is then sent either to a specialist recycler or to a facility licensed for this type of waste. The cleaned gases are finally released to the atmosphere through the chimney (14).

26. Why is Onyx only using road transport to bring waste to the facility?

Extensive studies have found that, at this time, rail and sea transport of waste from East Sussex and Brighton & Hove to the site are not practically and financially feasible. However, we have designed the facility such that, should this situation change, we have the means to receive waste in these ways.

27. Why is Onyx developing an ERF, i.e. burning, instead of employing other technologies such as Anaerobic Digestion or Mechanical Biological Treatment?

Modern energy recovery is a clean and efficient technology. There are other “new” technologies available but these still remain largely unproven and also generate substantial outputs which still have to be disposed of to landfill or through other means.

28. Will Onyx be importing waste from France?

There will be no waste imported from France or from anywhere else outside East Sussex and Brighton & Hove. The facility is designed specifically to process the residual household waste from East Sussex and Brighton & Hove.
