LONGRIDGE RD

ENERGY CENTRE

Air Quality and Odours

Energy Recovery Facilities (ERF), such as that proposed for Longridge Road Energy Centre, often result in people having queries about effects on air quality and health.

We have produced this information sheet to help those interested in the development to find out more about the steps undertaken through design and the regulatory planning and permitting process to protect the environment and health.

Policies and regulations in England do not allow permits or consents to be given to new facilities like LREC if there is any material risk to the environment or people's health.

Please see the 'Further questions' section of this fact sheet for how you can find out more and submit feedback.

Odours

A common perception raised on some ERF projects is that the transportation, storage and management of waste will generate local nuisance, odours or pests. Modern, well-managed ERFs are not an odour or pest nuisance.

The proposed facility, as well as the way that waste is transported to and from the site, is inherently designed to manage these potential hazards so that they do not present a risk to the environment or health. This is done through the following procedures:

- At no stage in the process will any waste be stored outside at the site.
- All waste deliveries will be via enclosed vehicles to prevent dust or litter escaping on route to the facility.
- All waste deliveries will enter an enclosed waste reception area, and the facility is sealed with a fast-moving roller door before any waste is deposited into the reception area.
- The facility works under negative pressure, where internal air is drawn into the combustion chamber, preventing any odour escaping the facility.
- No waste is left to stand, and is continually processed so that there is minimal time for odour generation, inside the facility.
- All odour emissions are drawn into and neutralised within the combustion chamber.

Such is the effectiveness of these proven design features that ERFs are not an odour or pest nuisance. As part of the planning application process an odour assessment specific to the local environment and community will be completed to test the proposed application.

Planning consent and a permit to operate will not be granted unless the proposed development satisfies the regulatory requirements set to protect the environment and health.

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Air quality

Communities will sometimes seek reassurance that ERFs will not present a risk to health from particulate matter or other emissions. Such emissions are well known, understood and addressed through design and extensive filter technology so that ERFs present a **negligible impact on local air quality, and no measurable risk to health** (Health Protection Agency, 2010).

Below is some key information on how air quality emission levels relate to ERFs:

- ERFs are subject to some of the most stringent regulatory regimes of any industry in the UK.
- The Environment Agency operates a permit process to ensure that ERFs are operated safely and that emissions are controlled to safe levels, through a rigorous regulatory regime to monitor operations. Monitoring results will be reported to the Environment Agency, who have the power to modify or halt operations if necessary.
- The air quality monitoring is set on environmental indicators that fall way below levels that would affect health, which means that the Environment Agency can intervene and withdraw a permit to operate well before any risk to public health.
- Emissions will be subject to a closely controlled combustion process, treatment of gases and extensive filtration technology to protect the environment and health.
- In contrast to emissions from sources such as traffic and domestic wood burning (which are released close to ground level and presents a greater risk of exposure), tall chimney stacks further ensure that the very small level of emissions released from ERFs are dispersed safely and are neither a predominate source, or a significant contributor.
- The emissions of oxides of nitrogen (NOx) from ERFs in the UK are far lower than those from road transport.
- The emissions of particulate matter smaller than 10 microns (PM_{10}) and smaller than 2.5 microns ($PM_{2.5}$) from ERFs in the UK are far lower than those from road transport or domestic wood burning.
- A study by Imperial College for Public Health England in 2017 concluded that emissions of particulate matter from existing ERFs were typically 0.1% of background levels.

The planning process will be testing and confirming air quality emission levels through:

- An air quality assessment – accounting for local weather conditions, topography and any other potential emissions sources locally, assessed to air quality objectives set to protect public health. This will include considering background air quality associated with the M6 motorway.
- A population and health assessment – drawing from and building upon the air quality assessment and the findings of the Committee for the Medical Effects of Air Pollution (COMEAP) to further explore any potential risk to local communities and respond to wider perceptions, while further testing Public Health England's formal position on the subject.

Planning consent and a permit to operate will not be granted unless the application satisfies the regulatory requirements set to protect the environment and health.

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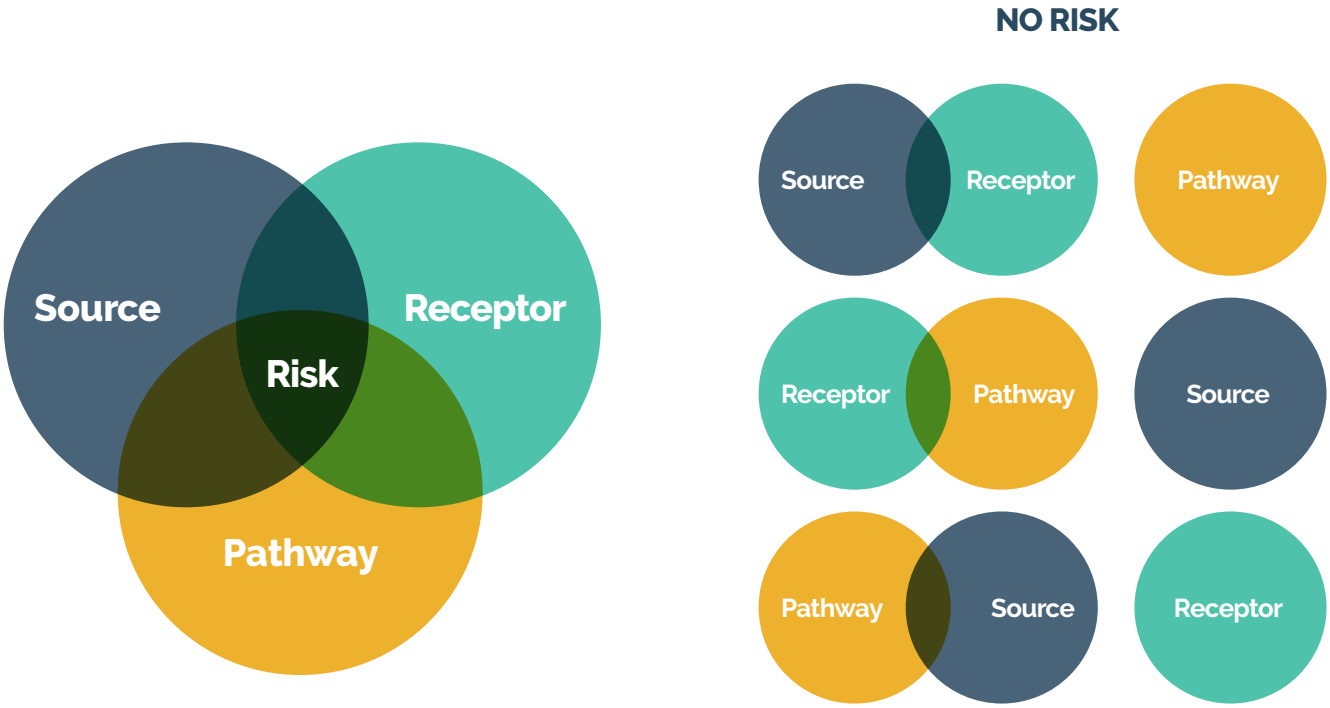
How is risk assessed?

Research into the potential health effects of air pollution is extensive, and forms the basis of national policy across a broad range of sectors, industries and products essential to modern life.

A common factor associated with community health and ERF projects is the difference between the terms hazard and risk, and how they are addressed through planning and permitting in the UK.
In its simplest form, a hazard is any agent with the potential to cause harm, and a risk is the likelihood of harm occurring.

The picture below shows that a hazard by itself does not constitute a risk – it is only when there is a hazard source, a receptor (i.e. a person or population) and a pathway connecting the two that there is any potential for risk to health.



Where a source-pathway-receptor linkage exists, it is then the nature of the specific hazard source, and the magnitude and concentration of exposure that define a level of risk. The source-pathway-receptor model is the primary mechanism to protect the environment and human health through the regulatory assessment and permitting process.

The health assessments being prepared as part of the ERF planning application will adopt the source-pathway-receptor approach.

Community unease sometimes occurs when the source-pathway-receptor concept is either ignored or misapplied to infer a risk where there may be no potential. This is typically where a source and a receptor are presented with no credible pathway of exposure to infer a risk, and can even occur where neither a source nor credible pathway exist.

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More information

Health Protection Agency, 2010:
https://www.gov.uk/government/publications/municipal-waste-incinerators-emissions-impact-on-health

Health Protection Agency, 2009:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/384592/The_impact_on_health_emissions_to_air_from_municipal_waste_incinerators.pdf

EfW Development Guidance:
http://www.wrap.org.uk/sites/files/wrap/O_And_EFW_Guidance_FULL.pdf

Further questions

While this fact sheet focusses on odours and air quality, we appreciate that some local communities may like further information. With this in mind, we would encourage you to share any questions and queries you may have through the consultation process which further informs the scope and focus of our assessments.

You can get in contact with us at the details below.

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