



Islington Environment and Regeneration Scrutiny Committee





Information for the committee on the North London Heat and Power Project



1. The background to the North London Heat and Power Project (NLHPP)
2. The facility aligns with waste forecasts including those prepared by the Greater London Authority and is in line with London-wide waste needs
3. North London Waste Authority is delivering waste reduction and recycling initiatives, with NLHPP assets contributing to plans to increase recycling
4. Suggested alternatives do not remove the need for an energy from waste solution
5. The Energy Recovery Facility has flexibility to deal with a range of future outcomes
6. The project is a key part of tackling the climate emergency
7. The project will have the cleanest emissions of any site in the UK
8. The real alternative is unattractive
9. Summary



About the North London Heat and Power Project (NLHPP)

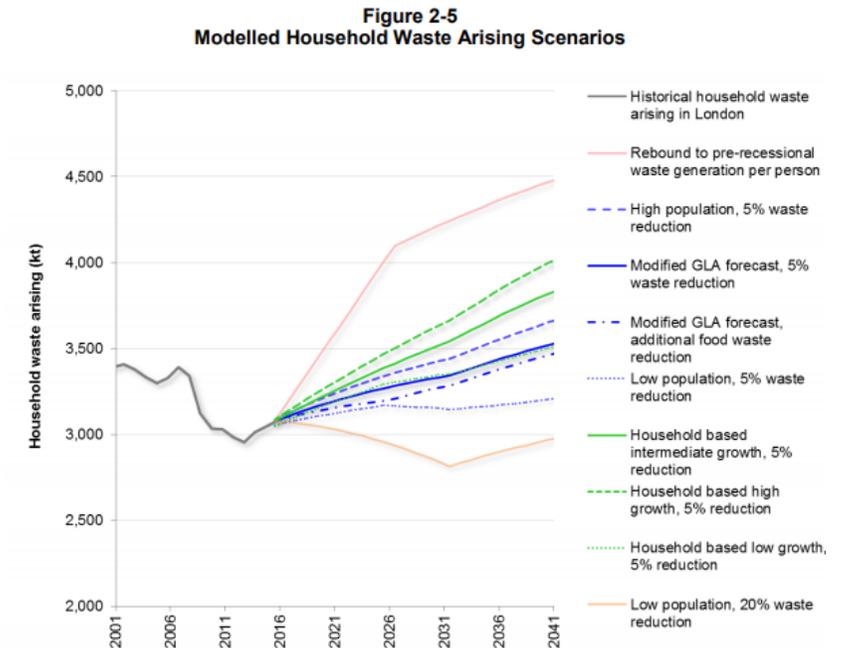


- The current plant at Edmonton EcoPark is one of the oldest Energy from Waste plants serving in Europe and is reaching the end of its operational life.
- **Development Consent Order** was granted in 2017 following extensive consultation, environmental assessment and analysis of alternative options.
- It is part of the solution for tackling the Climate Emergency and supports higher recycling rates across north London. The project is a vital part of our **sustainable waste strategy** for the future.
- Construction has been under way for nearly three years. The business and environmental case for the project remains strong



The planned facilities reflect forecast future needs

- Forecasting future waste volumes is complex. The chart on the right shows forecasts by the Greater London Authority for the volumes of household waste which could be generated in the capital by 2041. This was produced for the Mayor’s environment strategy.
- As a waste disposal authority, North London Waste Authority has no direct ability to determine manufacturers’ plans for the goods and packaging they produce, retailers’ plans, consumers’ habits or national regulation. However, NLWA does have a statutory duty to dispose of all waste sent to it by the seven constituent boroughs. It therefore needs to plan to deal with a range of possible outcomes
- An argument sometimes made is that volumes of residual waste are bound to reduce if recycling rates improve. As the diagram on the right shows, this is not correct. If total waste volumes increase then growth in recycling rates is needed even to keep residual waste around current levels.
- This is why the forecasts associated with the Development Consent Order showed residual waste in north London is expected to be between 509,000 and 713,000 tonnes in 2050.





Without NLHPP there is a shortfall in London’s energy from waste capacity



The Mayor’s Environment Strategy sets out London’s energy from waste capacity under three scenarios. From least to most ambitious these are as follows:

Scenario 3: a 50% recycling rate, with a 20% food waste reduction and 5% landfill rate. In this scenario **London needs 3,194,000 tonnes of energy from waste capacity**

Scenario 2: a 65% recycling rate, with a 5% reduction in all waste arisings and a 5% landfill rate. In this scenario **London needs 2,247,000 tonnes of energy from waste capacity**

Scenario 1: a 65% recycling rate, with a 50% food waste reduction and 5% landfill rate. In this scenario **London needs 2,070.000 tonnes of energy from waste capacity**

All these scenarios are ambitious and involve significant progress from current recycling performance.

London currently has 4 energy from waste facilities. The table below shows the capacity from London plants which will be available to 2050 – assuming that plants which at this time are already over 25 years old will be retired during the period. These capacity numbers are from the report by the GLA.

The capacity is insufficient for scenario 3 at any point. Therefore London would lack the capacity needed even with a 50% recycling rate

If the NLHPP facility is not built, then as soon as another existing plant retires – expected to be in the 2030s - there will be a shortfall of capacity under all scenarios, of between 18 and 47%. This contrasts with inaccurate claims that NLHPP is somehow surplus to London’s needs and would represent unnecessary “excess” capacity.

All other facilities are privately operated – by the companies Cory, Viridor and a joint venture between Veolia and iCON Infrastructure Group. Use of other facilities would mean increased greenhouse gas emissions from the additional transport and would be at a higher cost than using a publicly developed, publicly owned plant.

EfW capacity	2030	2035	2040	2045	2050
Total	2880K tonnes	2400K tonnes	2400K tonnes	2400K tonnes	2400K tonnes
Total without NLHPP	2180K tonnes	1700K tonnes	1700K tonnes	1700K tonnes	1700K tonnes

NLWA's recycling and waste reduction initiatives

- NLWA provides essential services on which society depends
- In addition to managing waste collected from the residents in the seven north London boroughs, it runs a number of initiatives to encourage waste prevention, repair, reuse, and correct recycling from residents. This includes:
 - identifying and implementing new opportunities to recycle additional material. This year the Authority has introduced **mattress recycling** and **polystyrene recycling** despite supply chains still recovering from the pandemic. This is taking waste out of the residual waste stream and adding to recycling
 - the UK's first **Low Plastic Zones**, encouraging retailers to come together and reduce the volume of single use plastic they use and offer to customers
 - **London's largest clothes-swap** "swishing" events, building up the credibility and popularity of second hand clothing
 - the "**thanks for trying**" campaign to raise awareness of contaminated waste and promote actions by residents which



NLWA's recycling and waste reduction initiatives

- While NLWA run these campaigns regularly, they need to be supplemented by national level reforms.
- NLWA lead the way to call on Government to speed up reforms that will making recycling compulsory and enable more plastic to be recycled. This includes:
 - Introducing a **deposit return scheme** for bottles and cans
 - Calling on government to make producers responsible for their packaging through the “polluter pays” policy, **Extended Producer Responsibility**
 - Giving local authorities additional powers to **enforce correct recycling**.
- On all of these issues the scope and pace of any Government activity is unclear. Some people talk as if the design and implementation of plans on some of these matters is settled. However, no definitive commitments have been made



New assets at Edmonton will serve the public good and be to the highest standard

The integrated waste facilities which the Authority is building will help increase recycling and get the most from our waste, supporting the delivery of a circular economy:

- **Reuse and Recycling Centre (below left):** a centre for residents to bring their bulky items directly to the EcoPark for recycling. This is linked to a “resource recovery facility” which is used for waste handling and sorting. This will provide a large flexible asset which will enable us to extract increased recycling from north London’s waste
- **EcoPark House (below right):** a new pavilion next to the River Lee Navigation. This will provide a visitor centre, community and education facilities for the benefit of local groups and schools, and a new home for Edmonton Sea Cadets





Pre-sorting of waste does not remove the need for an Energy from Waste facility



- A suggestion is sometimes made that “pre-sorting” of waste would be an alternative to the NLHPP. This is where black bag waste is put through a facility to extract recyclates before being treated in an Energy from Waste plant. NLWA monitors developments in pre-sorting across the waste sector. However, data show that mass sorting of residual waste is not successful at very large scale and it does not replace the need for an Energy Recovery Facility. Examples of experience with pre-sorting include
 - **Recycling and Energy Recovery Facility (RERF) in Leeds, opened in 2016:** while the facility was targeting 10% recycling of the materials received, the first three years in operation experienced a significant shortfall against this target. In 2019, the last year for which data are available only 101 tonnes of plastic were extracted from a facility treating some 170,000 tonnes of waste
 - **Allerton Park facility, near Knaresborough North Yorkshire:** it was reported on 1 November that the pre-sorting facility using mechanical and biological treatment had fallen short of targets since it opened in 2018; and in 2020/21 extracted only 1.08% of recyclate
 - **AEB plant in Amsterdam:** it is reported that the facility has recycled only 8.9% of the materials received after two years compared to the target of 21.2%, resulting in a significant amount of waste left over, which was sent for disposal in energy from waste facilities
 - **AVR facilities in the Netherlands.** According to the company’s 2020 annual report the company treated 2.269 million tonnes of residual waste, of which 26,000 tonnes of plastic was extracted via pre-sorting
- All the above pre-sorting facilities are directly associated with energy from waste facilities and **are not an alternative**. As indicated, they extract modest amounts of recycling and leave substantial volumes of waste for disposal via energy from waste. Proceeding with the NLHPP does not preclude NLWA adopting successful developments with strong environmental performance and good value for money in the future. These would build on current initiatives.
- NLWA had previously submitted an application to develop a pre-sorting facility using mechanical biological treatment at the site it owns at Pinkham Way in Haringey. This was withdrawn owing to concerns about the likelihood of it representing a good investment.

Flexibility of the Energy Recovery Facility

- The new Energy Recovery Facility has been designed to deal with a range of potential outcomes – reflecting the range of forecasts shown in earlier slides.
- It has the flexibility to cope with up to 700,000 tonnes of residual waste. This provides resilience and assurance of service. Even with lower volumes of annual waste it provides peak capacity to deal with times of high waste volume – for example early January after the public holiday time.
- Importantly it can also operate successfully with lower volumes of waste if there is success in reducing residual waste across north London. As the facility is owned by NLWA, Members will be able to decide on the use of the facility according to developments in waste management and recycling.





The NLHPP is the best waste solution for the climate



- **NLWA's plans are fully in line with the recommendations for achieving net zero carbon emissions set by the Climate Change Committee (CCC):**
 - Minimise waste as far as possible (especially food waste), increase recycling, reduce and then ban landfill use, and energy from waste plants to have carbon capture and storage by 2050.
- The CCC recognises that the waste sector has reduced greenhouse gas emissions faster than any other sector of the economy – **around 70% since 1990**. A key factor is the move away from landfill to energy from waste.
- NLWA's approach also aligns with the recommendations of the **All Party Parliamentary Group on Sustainable Resources** in the 2020 *No Time to Waste* report, which concludes that **combined heat and power is the best available technology** for residual waste management and an essential part of the transition to net zero.
- NLWA is accelerating and strengthening plans for **Carbon Capture, Storage and Utilisation (CCUS)**.
 - Installation of infrastructure on site and working with Government and others to create a "cluster" which will provide for transport and long term storage from the EcoPark and related installations.
 - The energy recovery facility can be delivered ready for adaptation to CCUS and will be a priority waste asset able to operate if non-CCUS plants are required to cease operation.
 - CCS would make the ERF carbon negative, and help to rebalance emissions from sectors to support the UK's overall effort to achieve Net Zero.
- The ERF will also support one of the UK's largest district heat networks to guarantee a low-carbon heating and hot water supply for at least 10,000 homes and businesses. The network has capacity to supply to up to 50,000 homes and business.





Emissions will be tightly controlled



- Energy from waste facilities in the UK must strictly adhere to stringent safe emission limits set by the EU Industrial Emissions Directive (2010) and operate in accordance with an Environmental Permit stipulated by the Environment Agency. Operators must provide ongoing reporting to demonstrate that facilities are operating safely
- As a result, modern well-run facilities in the UK make an extremely small contribution to emissions which affect air quality as reinforced by Public Health England
- The replacement ERF will have the most advanced emissions control technology of any UK plant, making it **cleaner and safer than any other UK facility**. The ERF will be the first in the UK to use **Selective Catalytic Reduction** to control NOx and, and the first to employ a **combined wet / dry scrubber system** to reduce particulate emissions
- NLWA's Members have specified emissions requirements more rigorous than any other operational facility in the UK. Our facility will operate at a fraction of the limits set by the Industrial Emissions Directive and the Environment Agency.
- The recent BBC series involving Sir David Attenborough "Earthshot – Repairing our Planet" referenced the Copenhill energy from waste plant in Copenhagen as a pioneering solution for cleaning up the city's air. Copenhill is a sister plant to the Edmonton ERF which uses much of the same advanced technology. The conclusion was that the Copenhill facility is so clean that *"you almost have fresh mountain air on top of it"*.
- 19 facilities have been given planning permission since approval was given for the North London Heat and Power Project. None will operate at sites with lower emissions than Edmonton



Selective Catalytic Reduction





The alternatives to the NLHPP are unattractive



NLWA continue to look for and implement new ways to increase recycling and reduce waste across north London, but the fact is that waste will still be produced even if recycling targets are met, and sustainable facilities are needed to manage it. The Mayor of London has made clear that London must take responsibility for its own waste.

If the energy recovery facility is not built,

- waste will have to be transported to other facilities generating the thousands of tonnes of emissions associated with up to 30,000 lorry movements per year.
- Alternative facilities will not have the class-leading environmental performance of the facility specified by NLWA members
- Alternative facilities will not support the green jobs in north London, local investment and apprenticeship opportunities already being delivered on the project
- NLWA will be dependent on capacity in private companies' facilities and the costs those companies stipulate for managing waste

Conclusion

- The North London Heat and Power Project provides modern, first class facilities for a high quality, sustainable waste disposal service for north London. It includes assets to support increased recycling, educational facilities and the cleanest energy recovery facility in the country
- Plans have been approved by Members, who are not driven by commercial requirements. The facilities will be built to the highest environmental standards, with a guaranteed connection to heat networks which maximise carbon efficiency and benefit local communities.
- The plan contribute to tackling the Climate Emergency in line with the recommendations of the Climate Change Committee
- As a result of owning the assets, the Authority can ensure that the facilities built can continue to evolve in line with technical and policy progress throughout its lifespan and can manage waste in line with future developments
- The existing facility is now at the end of its life and investment is needed to provide north London with the most modern and sustainable solution for managing residents' waste.

