Stop the Edmonton Incinerator Now
notoxicsmoke@gmail.com

Date: 8 January 2025

To: Ed Miliband MP, Secretary of State for Energy Security and Net Zero
Steve Reed MP, Secretary of State for Environment, Food and Rural Affairs

Re: NLWA letter to SoS Miliband greenwashes Edmonton incinerator

Dear Secretaries of State,

The Stop the Edmonton Incinerator Now (StEIN) coalition was disappointed to see misguided claims made by Cllr Clyde Loakes, chair of the North London Waste Authority (NLWA), in a letter to Secretary of State Miliband on 2 December 2024.[1]

Cllr Loakes was responding to an open letter we had sent you on 29 November 2024. In it, Friends of the Earth, Greenpeace, and more than 30 other groups called on the Government to withdraw support for the new waste incinerator in Edmonton, Enfield, and for its associated heat network.[2]

The StEIN coalition regrets to see that Cllr Loakes' letter repeats confusing, unsubstantiated, and long-refuted claims on the climate, health, financial, and recycling-related implications of the Edmonton incinerator, its heat supply, and Enfield's council-owned Energetik heat network. To support scrutiny of Cllr Loakes' claims, we have highlighted the following areas of concern in the Annex:

1. **Carbon emissions**
   Research shows that incineration produces far more CO2e than landfill, contrary to Cllr Loakes' assertions.
   Cllr Loakes' claims about the carbon intensity of incinerator heat rely on seriously flawed assumptions.
   The actual alternative to Edmonton is not landfill; it's incineration in a plant with carbon capture technology.

2. **Health risks**
   The public has a right to know projections of the *number* of nanoparticles to be emitted.
   NLWA has yet to respond to scientists' calls for enhanced monitoring of toxins.
   Cllr Loakes continues to mischaracterise scientific research and downplay EfW health risks.

3. **Financial risks**
   Incinerator costs continue to spiral while Cllr Loakes understates risks.
   Incinerator network heat is likely to require high prices for customers or subsidy from Enfield taxpayers.

4. **Recycling**
   Is Cllr Loakes really unaware of the correlation between incineration and low recycling?

We look forward to receiving your response to our open letter and its three demands, and to the concerns raised in the Annex below.

Sincerely,

Carina Millstone
On behalf of Stop the Edmonton Incinerator Now

ANNEX

1. CARBON EMISSIONS

Research shows that incineration produces far more CO2e than landfill, contrary to Cllr Loakes' assertions.

- It is unclear to StEIN on what basis Cllr Loakes claims that landfill is 'over 25 times more environmentally damaging in carbon terms' than incineration. Analysis by Eunomia founder Dr Dominic Hogg shows that NLWA's carbon figures are 'grossly misleading' because they are based on flawed calculations. Having corrected the methodology, Dr Hogg demonstrates that treating a tonne of waste in the Edmonton incinerator would actually produce significantly *more* CO2e emissions than landfilling it, and *increasingly more* over time (as the grid decarbonises).[3] NLWA owes the public corrected CO2e figures for the Edmonton incinerator.

- Zero Waste Scotland shows that biological treatment of food, cardboard, and garden waste results in 'biostabilised' waste that emits 20 times less CO2 than sending that same waste to incineration.[4] The biostabilisation process (material recovery and biological treatment, or MRBT) prevents biogenic material—whether collected or extracted through advanced sorting—from emitting methane.

- On a related note, the UK Climate Change Committee recently confirmed that it has not undertaken 'additional analytical work' to ensure that the UK waste sector provides the requisite 'complete coverage' of CO2e emissions from energy-from-waste incineration.[5] The resulting policy gap allows for reporting inconsistencies: the waste sector does not count emissions from burning biogenic matter, claiming (falsely) that the process is 'zero carbon', but it credits the very same emissions in its carbon capture projections.

Cllr Loakes' claims about the carbon intensity of incinerator heat rely on seriously flawed assumptions.

- Cllr Loakes correctly notes that the Climate Change Committee (CCC) supports district heating as 'crucial to decarbonising the energy mix in the UK'. What he fails to mention is that the CCC specified that heat produced by energy-from-waste plants without carbon capture technology is 'not particularly low-carbon' and that it called for a moratorium on new incineration capacity. Also relevant is that the CCC did not differentiate between the CO2e emissions from incinerator heat and those from genuinely low-carbon alternative heat solutions, such as local ground-source or air-source heat pumps, or sources of waste heat, such as the underground or data centres. These key oversights, which were recently revealed through a freedom of information request, undermine the CCC's district heat recommendations.

- Rather than touting incinerator heat as the only source that can offer local homes and businesses 'the chance to benefit from low carbon heating and hot water', Cllr Loakes and NLWA could usefully come clean on the potential of genuinely low-carbon heat sources.

- Given NLWA rhetoric to date, it is not surprising that Energetik's promotional materials make unsupported claims that the carbon intensity of incinerator heat is comparable to or even lower than that of low-carbon heat solutions, such as air-source and ground-source heat pumps. Indeed, Energetik's website 'for developers' features unsubstantiated assertions about incinerator energy being 'renewable' while playing down the role of genuinely low-carbon alternatives. In this way, the company has actively been encouraging and helping developers to use heat from the incinerator—instead of encouraging them to install genuinely low-carbon heat solutions from the outset.[6]

- Cllr Loakes is incorrect when he writes that the 'network in Edmonton is already built and is ready to take heat energy from the new energy recovery facility'. Some new estates have gas-powered energy centres run by Energetik, with an agreement to take heat when the new incinerator is commissioned. Only some of the pipes that are to carry the heat to these 'satellites' have been laid, and the heat itself may not be available before 2028.[7]

- Given that both the energy network and the incinerator are far from completed, councils have a window of opportunity to align future planning and policy with decarbonisation targets. They could begin that process by reviewing and revising carbon assessments of incinerator heat, as well as by guiding developers to assess the lowest-carbon heat solutions.

The actual alternative to Edmonton is not landfill; it's incineration in a plant with carbon capture technology.

- NLWA's own 'alternative waste disposal methods' scenario of 2021 assumes that if the Edmonton incinerator were not built, then all waste would instead be treated 'at a third-party facility, assuming that sufficient capacity could be secured'. In this scenario, the EcoPark South recycling facilities would still be built, while the old incinerator would cease operation in 2026 and be demolished. NLWA goes on to say that that the main feasible alternative to the new incinerator would involve a long-term contract for '400,000 tonnes of residual waste'.[8] This tonnage accounts for just over half of the planned incinerator's 700,000-tonne capacity, raising questions as to the justification for such a large incinerator. The scenario is also inconsistent with Cllr Loakes' persistent claim that landfill is the only alternative to the incinerator.

- The Edmonton incinerator is being built without carbon capture and storage (CCS) technology. NLWA does not anticipate CCS to be installed for at least another decade, if at all. Other incinerators, including the Cory I and II facilities in Bexley, London, are expected to be equipped with CCS before the Edmonton plant is completed in 2027 or 2028. Given this option, StEIN urges Cllr Loakes to explain why he argues that the Edmonton incinerator would be the 'least carbon polluting solution' for treating north London's waste 'even without carbon capture'. Sending north London's truly unrecyclable waste to Bexley would also obviate the 'added impacts of transporting waste outside the city' feared by Cllr Loakes. And with today's electric transport, excessive emissions need not be incurred.

2. HEALTH RISKS

The public has a right to know projections of the *number* of nanoparticles to be emitted.

- Cllr Loakes refers to the use of 'advanced technologies' to 'capture and control pollutants including dioxins'. In a report about incinerator pollution issued by the All Party Parliamentary Group (APPG) on Air Pollution, however, medically qualified toxico-pathologist Prof. Vyvyan Howard calls Loakes' statement into question. He points out that nanoparticles—also known as ultrafine particulates (PM0.1)—'constitute a significant health hazard', make up by far the majority of emitted particles, and are able to pass through advanced filters 'into the local environment'. The APPG report stresses: 'Of critical importance is that it is the *number* of particulates, as opposed to their combined mass, that is the key determinant for human ill health. The smallest particulates act like a gas and penetrate seamlessly into the blood stream and organs.'[9]

- With reference to ultrafine particulates, Bill Parish, head of Air Quality and Industrial Emissions at Defra, testified to the Environment, Food and Rural Affairs Committee that 'because they are so small, it's very difficult to find a filtration process that can capture them all'. He added that 'the further away [incinerators] are from people, the less people are exposed'.

NLWA has yet to respond to scientists' calls for enhanced monitoring of toxins,[10] including:

- dioxins and furans;[11]
- total organic carbon (TOC), which contains toxic chemicals known as volatile organic compounds;[12] and
- other toxic pollutants, such as carbon monoxide, hydrogen chloride, hydrogen fluoride, sulphur dioxide, cadmium and thallium, and mercury, none of which are mentioned in NLWA's 'five-stage cleaning process'.[13]

Cllr Loakes continues to mischaracterise scientific research and downplay EfW health risks.

- Cllr Loakes refers to 'scientific evidence' that modern incinerators 'do not pose a significant risk to public health'. In particular, NLWA tends to cite text from an Imperial College study to dismiss health-related concerns. Yet even the study authors admit that their findings on birth defects are 'inconclusive' and 'limited by a number of factors'. For example, they lacked measurements of metals and chemical compounds, including polychlorinated biphenyls (PCBs) and dioxins, and therefore used PM10 concentrations 'as a proxy' for exposure to incinerator emissions.

- Unlike the limited research typically cited by NLWA and other EfW incineration proponents, a significant meta-study published in 2019 assesses 93 scientific research papers and corroborates the plausibility of a causal link between waste incineration and birth defects and miscarriage. The study finds that there is insufficient evidence to conclude that any incinerator is safe, and that it is premature to conclude that new technologies improve the safety of EfW incinerators. The study calls for incinerator design that meets guidelines under the Stockholm Convention on Persistent Organic Pollutants,[14] which commits signatories, including the UK, to eliminating incineration as far as possible through enhanced reuse and recycling. This approach links to expert recommendations that licences not be granted to any incinerator that is not extracting recyclate before burning.[15]

- Beyond the above-cited meta-study, a growing body of research is increasingly demonstrating that people living near municipal waste incinerators—as well as people consuming foods grown near such plants—have increased levels of dioxins and other toxic pollutants in their bodies.[16]

3. FINANCIAL RISKS

Incinerator costs continue to spiral while Cllr Loakes understates risks.

- Some reporting suggests that NLWA's contract with the Spanish construction company Acciona is worth £683 million. In March 2022, however, ENDS reported that the contract came in at £799.3 million (a 17% increase on the above-mentioned sum). The figure is likely to be higher still in view of cost projections for the whole EcoPark complex, which recently increased by 25%, from £1.2 billion to £1.52 billion, based on 'costs incurred up to the end of January 2024'. Meanwhile, the cost of capital remains very high, translating into additional costs as the plant's completion date is further delayed (from an initial deadline of 2025 to 2027 or 2028). NLWA is committed to borrowing even more money for the construction, which will effectively saddle the taxpayers of the seven north London boroughs with more debt to repay.

- Cllr Loakes has failed to acknowledge that if the 700,000-tonne Edmonton incinerator is built as planned and Government measures such as the deposit return scheme, extended producer responsibility, and simpler recycling succeed in driving down incineration tonnage,[17] the plant may be unable to run two streams,[18] NLWA's revenue from recycling and electricity sales will plummet, and the facility will become increasingly likely to turn into a white elephant.

Incinerator network heat is likely to require high prices for customers or subsidy from Enfield taxpayers.

- Cllr Loakes says that the Edmonton incinerator will support a heat network and 'provide the best value for the taxpayer'. But the taxpayer is picking up some of the bill for installing the heat network infrastructure across Enfield, as the UK Government 'awarded Energtik £17m in grants and £22m in loans for the Enfield part of the heat network' (via the Heat Network Investment Project). In addition, Enfield Council reported that it pays interest on loans from the Mayor and the Government. But the council loses out on contributions to its carbon offset fund because building developers can claim to be using 'clean' heat from waste incineration in their energy assessments and thus avoid contributing to the fund. Indeed, in a GLA carbon offset survey conducted in October 2024, Enfield Council—along with Sutton and Bexley councils, which also have actual or planned EfW incinerators—had the lowest contributions from developers, and thus much less funding for local programmes to lower carbon emissions.

- To repay loans, enough building owners need to connect to the heat network; otherwise, Enfield taxpayers will have to make up losses. How many connections are required remains unclear.[19]

- Separately, imminent legislation restricting charges to be no higher than alternative heat will reduce Energetik's (and thus Enfield's) income from consumers.

4. RECYCLING

Is Cllr Loakes really unaware of the correlation between incineration and low recycling?

- In his letter to the energy and net zero secretary, Cllr Loakes repeats the false, thoroughly debunked notion that 'there is no evidence to suggest that low recycling rates are associated with using energy from waste for disposal'. Government and other expert assessments have long demonstrated that there is indeed a correlation between high rates of incineration and low rates of recycling.[20] This data is readily accessible, as is information from councils attributing their low recycling rates to incineration-based waste contracts that prevent or disincentivise them from investing in recycling.[21]

- While Cllr Loakes argues that 'there is no conflict with our efforts to boost recycling', signs that NLWA is still failing to prioritise recycling include the following:
    - north London's dismal recycling rate (about 30%, far below the 2020 target of 50%);
    - the closure of the Gateway recycling and reuse centre in Waltham Forest;
    - the expectation that north London residents will travel long distances to dispose of their items at the EcoPark's difficult-to-get-to site;
    - an unwillingness to resize the planned Edmonton incinerator (which is 30% larger than the current facility) in line with the decline in waste arisings (meaning that NLWA is more likely to burn food waste and other recyclables—or to import more waste[22]—to ensure the plant operates at capacity); and
    - the failure to make public the assessment of mixed-waste sorting technology that experts have long advocated as a means of extracting recyclables from the incineration waste stream, reducing CO2e emissions, lowering toxic pollution, and slashing costs.[23]

NOTES

[1] The letter from Cllr Loakes to SoS Miliband is available at https://www.nlwa.gov.uk/ourauthority/scheme-of-publications/letter-ed-miliband-response-campaigners.
[2] The StEIN coalition's open letter is available at https://stop-edmonton-incinerator.org/2024-11-29-miliband-open-letter-annotated.

Carbon emissions from landfill v. incineration

[3] Eunomia founder Dr Dominic Hogg identified two key errors in NLWA's CO2e emissions figures: a methodological flaw in the way landfill was assessed and a failure to update a 2013 figure for the avoided carbon intensity associated with power generation. Dr Hogg concluded that the use of a 2013 figure for an incinerator that was not expected to be operational until 2026 or later 'is either grossly misleading or reflects a failure to understand what is happening to the UK power generation system', which is decarbonising rapidly. NLWA secured development consent and an environmental permit for the incinerator based on these flawed calculations, which produced a significant underestimate of the incinerator's CO2e emissions. By failing to publish revised carbon figures, NLWA continues to spread 'grossly misleading' statements to the public and politicians about the true carbon footprint of the Edmonton incinerator.

[4] While landfilling waste whose methane-emitting matter has been stabilised is significantly less carbon-intensive than burning it, landfilling waste is not a viable option in the UK because it is too expensive. The standard landfill tax is set to reach £126.15 per tonne in 2025/26. The Emissions Trading Scheme (ETS) carbon price could potentially flip the balance when it kicks in for energy-from-waste incineration in 2028, but that effect is likely to be temporary.

Additional information on the ETS: Unlike Cllr Loakes, the StEIN coalition welcomes the inclusion of energy-from-waste incineration in the ETS as a way of driving down both greenhouse gas emissions and arisings of unrecyclable waste by incentivising local councils to minimise the amount of waste they send for incineration to save waste disposal costs. Nearly five years ago, the UK Without Incineration Network (UKWIN) recommended assessing and quantifying the potential cost increases associated with the inclusion of incineration in an ETS as part of a value-for-money review of the Edmonton incinerator. It is not clear whether NLWA's constituent councils assessed these financial risks before deciding to build the incinerator, especially given that in November 2024, Cllr Loakes asked north London MPs to take action to exclude local authority waste from the ETS or provide councils with funding to cover the costs rather than reduce waste. He argued that the ETS 'places unsustainable strain upon stretched borough budgets' and 'add[s] risk to local authority finances'. Starting in 2028, north London councils will be required to pay ETS fees estimated at £100–£170 per tonne. NLWA could reduce this financial risk by installing advanced sorting technology, as StEIN has advised since 2020 and as NLWA recently acknowledged in response to an FOI request.

Undercounting of biogenic emissions

[5] When reporting on greenhouse gas (GHG) emissions, the UK energy-from-waste (EfW) sector currently attributes zero CO2e emissions to the burning of biogenic materials (which accounts for about half of all EfW emissions, the other half being released mostly through the burning of plastics). The sector claims to be following the guidance of the Intergovernmental Panel on Climate Change (IPCC) when it assumes that all the relevant emissions are either counted by other sectors (agriculture, forestry, and other land uses, or AFOLU) or that they are effectively zero based on the discredited carbon neutrality assumption (which holds that carbon sequestered during biomass growth is equal to carbon emitted through biomass incineration).

Under the UN climate change framework, however, countries have committed to adhering to the Guidelines of the IPCC, which require 'complete coverage' of all relevant emissions. The IPCC specifies at FAQ Q2-10A: 'The approach of not including these emissions in the Energy Sector total should not be

interpreted as a conclusion about the sustainability, or carbon neutrality of bioenergy.' Further, the IPCC notes that:

- its Guidelines 'do not automatically consider or assume biomass used for energy as "carbon neutral"';
- its Guidelines 'do not provide an analytical approach for assessing the full bioenergy emissions at sub-national entities such as industry sectors'; and
- complete coverage 'may require additional analytical work and assumptions [...] to attribute all relevant bioenergy emissions (e.g. those associated with growing bioenergy crop, land-use change, fertilization, transportation, etc.)'.

Although these points are clearly at odds with the UK waste sector's approach, neither the UK Government nor the UK Climate Change Committee has any documented reasons for failing to undertake the 'additional analytical work and assumptions' required to ensure 'complete coverage'. Unless and until this policy gap is addressed, the waste sector will continue to undercount its GHG emissions by disregarding biogenic emissions, while simultaneously—and illogically—counting the very same biogenic emissions in the context of capturing and storing emissions.

Carbon intensity of incinerator heat

[6] Energetik makes unsubstantiated claims based on false assumptions in its promotional materials and on its website. In its *Heat Customer Information Pack* of 2024, for example, the company promises a '60% carbon reduction in our customers' carbon footprint from heating compared to a heat pump alternative', with a footnote saying 'when connected to the [Edmonton incinerator] in 2026'. Similarly, it pledges that 'homes connected to the Meridian Water heat network will produce over 90% less carbon dioxide emissions than if they had traditional gas boiler heating systems. This great saving will come from making use of low carbon heat produced at the Edmonton Eco-Park.' These assertions reflect invalid assumptions, including that:

- there are no lower-carbon alternatives to individual gas boilers;
- the carbon intensity of the electricity grid is roughly what it was ten years ago and the grid will not decarbonise over the life of the heat network;
- all the heat produced gets to the customers;
- the embodied carbon and fuel used prior to connection to the heat network of satellite energy centres can be disregarded;
- carbon lost due to demand flexibility is zero; and
- carbon emissions from energy used to pump hot water (including uphill) can be disregarded.

Furthermore, Energetik's website says: 'We've worked hard to make it easier for new developments in Enfield to meet planning regulations. Simply connecting a new development to our community energy network will immediately achieve the necessary reduction in carbon emissions. In most cases this means that no other renewable energy solutions need to be incorporated.'

By taking this position, Energetik discourages major developers in Enfield from adopting truly sustainable heating—and cooling—solutions, such as heat pumps, in favour of taking heat from the incinerator, which is a long way from completion. As a result, built and planned homes rely on gas as the interim heat source, in an approach that frustrates the construction of truly sustainable homes.

Regardless of what Energetik might claim, the current knowledge gap precludes a sound basis for decision-making on the heat and hot water supply for the district heat network and any connected systems, since truly low-carbon alternatives have yet to be evaluated in this context. For information on how Energetik helps developers to avoid paying contributions to Enfield Council's carbon offset fund by claiming to be using 'clean' heat from waste incineration in their energy assessments, see Section 3 on financial risks.

In view of these market distortions, building owners who are considering heat source options may wish to heed the expert advice published in Environmental Finance in April 2022, which specified that

'new developments, such as the estate that Edmonton seems likely to supply, should be designed from the outset with ultra-energy-efficient buildings with vanishingly small heat needs and with residual heat needs met by heat pumps or renewable heat sources'.

Heat network construction

[7] Only the Meridian Water energy centre and satellite energy centres in Arnos Grove, Oakwood, and Ponders End have been completed; they are using gas for heat and power and will receive hot water from the incinerator once it is operational. Construction works are currently taking place along Hertford Road, approaching Ponders End, and in Albany Road near Meridian Water. The planning application for construction of the underground network of hot water pipes to Arnos Grove (23/00327/FUL) was withdrawn over a year ago.

Alternative waste disposal scenario

[8] While it is not clear how many years would be covered in the scenario's 'long-term' contract for the 400,000 tonnes, that tonnage estimate does come in between two recent NLWA projections for 2050 that assume 'low tonnage growth' with high or best-practice recycling: 280,000 tonnes and 500,000 tonnes, respectively.

Nanoparticles and other toxic emissions

[9] A similar point was raised in the press release accompanying StEIN's open letter to energy secretary Miliband, which quotes Aurora Yaacov, an Enfield resident who is involved in local air pollution monitoring: 'If they don't cancel the new incinerator, it will pump extremely dangerous nanoparticles onto a community that has already been exposed to high toxicity levels from the current plant for five decades. Unlike the larger PM2.5 particles, nanoparticles can pass through the most advanced filters just like a gas. And they can cross the blood–brain barrier and other membranes in your body, causing significant health problems.'

[10] In the UK, dioxins, heavy metals, and other persistent organic pollutants from incinerators are not continuously monitored, but only sampled twice a year, for a few hours each time. The results of these sampling procedures grossly underestimate the amounts of dioxins and other harmful pollutants released from waste incinerators. See, for example, https://www.toxicowatch.org/blank-1 and https://ukwin.org.uk/resources/health/dioxins-and-other-harmful-incinerator-emissions/.

UK researchers recognise that the dearth of data also impedes studies of health effects. University of Leicester Prof. Anna Hansell, who has studied the presence of incinerator toxins in breast milk, said: 'We need more monitoring of dioxins and PCBs from incinerators, both in the chimneys and the wider environment. Without both, it is not easy to tell whether the incinerators are the source.' See also https://www.sciencedirect.com/science/article/pii/S0160412018316398?ref=cra_js_challenge&fr=RR-1 and https://www.sciencedirect.com/science/article/pii/S0160412019308104?via%3Dihub.

Enhanced monitoring is key to informing air quality policy, especially since UK thresholds, such as those for PM2.5, are significantly higher than limits set by the World Health Organization for 'safe' air. Moreover, enhanced monitoring can help to call attention to the need to cover unregulated particles.

[11] Dioxins and furans are persistent organic pollutants that cause cancer, reproductive and developmental problems, endocrine disruption, and damage to the immune system. Dioxins pose a health risk on contact and can be carried on ultrafine particles through the air for hundreds of miles, so there is a dispersion effect from high chimneys. They bioaccumulate in crops, insects, animal fatty tissue, eggs, and dairy, meaning that they enter the food chain and can end up being consumed by humans.

A recent study found that municipal waste incineration is the second-largest source of dioxin emissions, accounting for nearly one-fifth (17%) of all dioxins worldwide, after the open incineration of waste, which is responsible for 45% of all dioxins. The presence of metals and plastics (such as PVC) in waste facilitates the production of dioxins during the incineration process, requiring ever more

complicated and expensive interventions to reduce the amount of dioxin emissions, and underscoring the need to extract recyclables from the incineration waste stream. Dioxins can also form through *de novo synthesis*, a process by which emissions discharged from the incinerator smokestack combine to form new toxins.

The annual performance reports covering 2018–2023 for the Edmonton incinerator document repeated instances of excess emissions due to the rupture of bag house filters, which capture dioxins. Furthermore, the reporting itself has become increasingly opaque over this period. The 2018 annual report provides quantities of captured toxins released (five releases of 1m^3 of toxic residues). Reports for subsequent years, however, do not specify quantities released; moreover, they refer to 'dust' instead of making use of the appropriate terminology ('air pollution control residues', or APCr). The public has a right to know which types of filters will be used in the new incinerator, whether and how these differ from the ones used in the current incinerator, and what steps will be taken to reduce the number of ruptures in the future (for example, more frequent filter replacement).

The environmental statement for the Edmonton incinerator states that no monitoring is undertaken for dioxins or furans in the north London boroughs and that the only monitoring station for dioxins in London is in Westminster, but that no data has been available since 2010.

[12] Volatile organic compounds cause eye, nose, and throat irritation; headaches; respiratory problems; nausea; damage to the central nervous system, liver, and kidney; and cancer.

[13] For continually updated assessments of the predicted state of pollution from the planned Edmonton incinerator, see the Plume Plotter website. For more information on the toxic toll of waste incineration, see Zero Waste Europe's webinar of 3 March 2022. See also Zero Waste Europe's report about the toxicity of incinerator bottom ash, which calls for an end to its use as a building material.

Stockholm Convention on Persistent Organic Pollutants

[14] Signatories to the Stockholm Convention commit to disposing of waste in a way that does not just reduce persistent organic pollutants, such as dioxins, but that *destroys* them.

[15] There is no accounting of the ways in which NLWA sought to eliminate incineration as far as possible by implementing enhanced reuse and recycling, nor of why it has rejected the option of implementing state-of-the-art mixed-waste sorting technology, which would help to reduce the amount of plastic (and other recyclables) that go to incineration and produce toxic emissions.

[16] See, for example, https://www.sciencedirect.com/science/article/pii/S132602002300732X and https://pmc.ncbi.nlm.nih.gov/articles/PMC10506904/.

Waste reduction

[17] The UK's deposit return scheme, extended producer responsibility, and simpler recycling policies are designed to help achieve the Government's 65% recycling rate for municipal waste by 2035 under the Environment Act, as well as the halving of residual waste per person by 2042 compared to 2019. In north London, these measures should help to drive down the tonnage of incinerated waste, which already dropped from just under 500,000 tonnes in 2019 to 484,000 tonnes in 2023, based on government data. By building an incinerator large enough to accommodate 700,000 tonnes per year, 30% more than the current plant, NLWA thus goes against the official direction of travel. In addition, Cllr Loakes' claim that London would have an energy-from-waste capacity shortfall conflicts with the Mayor's calculations, which show that London would have 250,000 tonnes of *surplus* capacity even if the Edmonton plant were left unbuilt (and 950,000 tonnes if it became operational). In response to Defra's recent waste capacity note, an FOI request has been submitted to ascertain the composition of London waste, which Cllr Loakes apparently assumes would be entirely suitable as incinerator feedstock.

Incinerator design limitations

[18] As NLWA disclosed in response to an FOI request, the incinerator's two-stream design is not flexible enough to run both streams when received waste exceeds one stream's capacity but is not sufficient for two half-loaded streams. In that case, one stream would be shut down, waste would have to be stored

onsite for days, and unpleasant odours would waft across the area, especially during warm months. A more likely scenario, however, is that NLWA would seek to prevent the incinerator from having idle capacity, which would put recycling in danger or risk waste imports from far afield (see Section 4 on recycling).

Meanwhile, NLWA's income would not be affected if it did not export any heat but instead supplied additional electricity to the grid, according to the waste authority's response to another FOI request.

Uncertainty regarding Energetik's viability

[19] The business case for heat offtake through Energetik has become increasingly difficult to follow. In response to an FOI request (available on request but not published), Energetik stated that the plans were based on supplying incinerator heat to 100,000 homes, including thousands of speculative connections in Haringey and even Hackney. Other sources, including Ernst and Young, reference business connections as well as homes. Cllr Loakes refers to 60,000 properties in his letter to energy secretary Miliband, but planning approval numbers to date come in well below that figure, even when they factor in expected connections at the new Meridian Water estate, where Energetik forecasts 15,000 domestic connections in the short term and 'in excess of 30,000 homes' in the long run. Transparency on Loakes' projected 60,000 customers is required to allow for adequate scrutiny of the business plan, especially since Enfield Council's cabinet reports that 'around 17,000 customer connection numbers are required to be achieved for revenues to cover operational costs (excluding connection fees)'.

Recently Haringey Council realised that it cannot fund plans to connect Tottenham Hale and Wood Green to the district heat network; constructing this network to connect to existing local district heat networks is unlikely to be a reasonable investment for Haringey residents to repay. If Haringey Council changes its strategy to focus on genuinely low-carbon heat across the whole borough, income from out-of-borough connections on which Energetik relied would not materialise, while Enfield Council would forego returns required to repay loans to Energetik.

The correlation between incineration and low recycling

[20] See, for example: https://ukwin.org.uk/files/pdf/UKWIN-Policy-Suggestions-November-2020.pdf; https://ukwin.org.uk/2014/10/22/ukwin-welcomes-efracoms-incinerator-caution/; https://ukwin.org.uk/btb/BtB_Incineration_Harms_Recycling.pdf; and http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/housing-communities-and-local-government-committee/implications-of-the-waste-strategy-for-local-authorities/written/103388.pdf.

[21] A report by the London Assembly Environment Committee corroborates these findings: 'The terms of [incineration] contracts, such as minimum annual payments, or a low fee per tonne of waste, can undermine the financial viability for the local authority of reducing waste, or sending it to other destinations such as recycling.'

See also https://ukwin.org.uk/files/pdf/UKWIN-EPR-Consultation-Submission-May-2019.pdf; https://ukwin.org.uk/files/pdf/UKWIN-Incineration-Overcapacity-Briefing-September-2023.pdf (p. 6); https://ukwin.org.uk/files/pdf/UKWIN-Incineration-Overcapacity-Annex-2023.pdf (pp. 12–14); https://ukwin.org.uk/files/pdf/UKWIN-Examples-of-incineration-harming-recycling-July-2019.pdf; and http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/environment-food-and-rural-affairs-committee/plastic-food-and-drink-packaging/written/104997.pdf.

[22] To make up for the 'shortfall' between the Edmonton incinerator's capacity and waste collected by the seven north London councils in 2024/25, NLWA plans to source 128,000 tonnes of waste in addition to the waste collected by north London's local authorities. If the incinerator is to operate at capacity and that shortfall grows as Government measures drive down waste, NLWA may decide to import increasing amounts of waste from beyond north London.

[23] See, for example, reloop's 2022 report *The case for sorting recyclables prior to landfill and incineration*. Similarly, the 2023 NLWA Waste Projections Briefing Note by Frith Resource Management notes that a way to boost the recycling rate is through 'recycling from a dirty MRF [material recovery facility] or pre-treatment before EfW'.