
***UNITED KINGDOM WITHOUT
INCINERATION NETWORK***



**UKWIN
PLANNING OBJECTION**

Proposed Development:
**East Midlands Energy Re-Generation (EMERGE) Centre and
associated infrastructure**

Proposed Location:
**Ratcliffe-on-Soar Power Station, Nottingham, Ratcliffe-on-Soar,
NG11 0EE**

Applicant:
Uniper UK Limited

Nottinghamshire County Council Planning Reference:
ES/4154

August 2020

INTRODUCTION

1. The United Kingdom Without Incineration Network (UKWIN) was founded in March 2007 to promote sustainable waste management.
2. The East Midlands Energy Re-Generation (EMERGE) incinerator proposal conflicts with various local and national planning policies and objectives.
3. This submission identifies some key conflicts with the Nottingham and Nottinghamshire Waste Core Strategy.
4. This submission focuses on three main areas of concern:
 - The adverse climate change impact of the proposed EMERGE incinerator;
 - The need, or otherwise, for the proposed EMERGE incinerator capacity (of between circa 472,100 and 524,550 tonnes per annum) and associated adverse impacts; and
 - The adverse impacts of the proposed EMERGE incinerator on visual amenity and the actual and perceived openness of the green belt.
5. **UKWIN objects to this proposal**, and calls upon Nottinghamshire County Council to **refuse** the planning application.

NOTTINGHAMSHIRE WASTE CORE STRATEGY (WCS)

WCS3: Future waste management provision

6. WCS Policy WCS3 states that:

"Future waste management proposals should accord with our aim to achieve 70% recycling or composting of all waste by 2025...Proposals will therefore be assessed as follows: ...b) new or extended energy recovery facilities will be permitted only where it can be shown that this would divert waste that would otherwise need to be disposed of and the heat and/or power generated can be used locally or fed into the national grid; ..."

7. The applicant has not shown that their proposed EMERGE incinerator would divert waste that would otherwise need to be disposed of. As noted below, the facility might take waste from existing incinerators (e.g. Eastcroft and Sheffield), and emerging NSIPs (e.g. Boston and North Lincolnshire), and from recycling.
8. Diverting feedstock from existing (and emerging) incinerators does not meet the WCS3(b) policy requirement because it would not be diverting "waste that would otherwise need to be disposed of."
9. Burning substantial quantities of Lincolnshire's waste in Nottinghamshire instead of Lincolnshire does nothing to move waste management up the waste hierarchy.
10. The EMERGE incinerator application fails to demonstrate that their proposal would be compatible with the achievement of the WCS3 70% recycling target (or even the Government's 65% recycling target).
11. Furthermore, the applicant has not shown that sufficient feedstock would be made available to them from within Nottingham and Nottinghamshire for the duration of the planning permission to prevent reliance on importing significant quantities of waste from outside of the Plan area to be used as feedstock.
12. We also note that the connection to the power grid does not form part of the planning application and as such without planning controls it cannot be ensured that energy would "be used locally or fed into the national grid".
13. As such, for these reasons which are set out in more detail below, the proposal should be determined on the basis that it conflicts with Nottinghamshire and Waste Core Strategy Policy WCS3.

WCS12: Managing non-local waste

14. WCS Policy WCS12 states that:

"Waste management proposals which are likely to treat or dispose of waste from areas outside Nottinghamshire and Nottingham will be permitted where they demonstrate that: a) the envisaged facility makes a significant contribution to the movement of waste up the waste hierarchy, or b) there are no facilities or potential sites in more sustainable locations in relation to the anticipated source of the identified waste stream, or c) there are wider social, economic or environmental sustainability benefits that clearly support the proposal."

15. Whilst it appears that the EMERGE incinerator is likely to treat waste from outside Nottingham and Nottinghamshire, the applicant has not demonstrated that the proposal meets any of the three criteria relating to the treatment of non-local waste.
16. In relation to (a), the facility appears more likely to divert waste from other incinerators and from recycling facilities than from landfill, and therefore the applicant has not shown that their proposal would make a significant contribution to the movement of waste up the waste hierarchy.
17. In relation to (b), the applicant does not appear to have carried out any alternative site appraisal and nor have they shown that there are no facilities or potential sites in more sustainable locations in relation to the anticipated source of the identified waste stream.
18. In relation to (c), the applicant has not demonstrated that there are wider social, economic or environmental sustainability benefits that clearly support the proposal. As noted below, for example, the claimed climate change benefits assume waste would otherwise be sent untreated to landfill when this is not a realistic prospect, and even then the applicant acknowledges that the EMERGE incineration plant could perform worse than landfill in terms of GHG emissions.
19. For the size of the proposed development site, the number of jobs claimed is relatively low given the land take of the facility, and a far greater number of jobs accompanied by other social and economic benefits would be created through investment in recycling to meet the Waste Core Strategy's 70% recycling target - a target which could be undermined by this proposal.
20. We note the WCS Performance Indicator: *"New facilities located in accordance with criteria set"* and associated target of *"100% of permitted facilities meet WCS12 Criteria"*. This proposal does not accord with the criteria and would therefore go against the WCS target.
21. For reasons outlined above, and set out in more detail below, the proposal should be determined on the basis that it conflicts with Nottinghamshire and Waste Core Strategy Policy WCS12.

WCS4: Broad locations for waste treatment facilities

22. WCS Policy WCS4 states that:

"Large-scale waste treatment facilities will be supported in, or close to, the built up areas of Nottingham and Mansfield/Ashfield...In the Green Belt proposals for built waste management facilities would constitute inappropriate development and will be permitted only where need and other material considerations amount to very special circumstances sufficient to outweigh harm to the Green Belt and any other harm identified."

23. The proposed EMERGE incinerator constitutes inappropriate development in the Green Belt and would be a large scale facility which is not in, or close to, the built up areas of Nottingham and Mansfield/Ashfield.

24. The applicant has not demonstrated that need and other material considerations amount to 'very special circumstances' sufficient to outweigh any harm to the Green Belt and any other harm identified.
25. We note the WCS target of "100% meeting broad location criteria".
26. This proposal should be determined on the basis that it conflicts with Nottinghamshire and Waste Core Strategy Policy WCS4 as this proposal fails to meet the broad locational criteria as set out in WCS Policy WCS4. The development would instead constitute unjustified inappropriate development in the Green Belt.

WCS14: Managing Climate Change

27. WCS policy WCS14 states:

"All new...waste management facilities should be located, designed and operated so as to minimise any potential impacts on...climate change."

28. The performance indicator for policy WCS14 is that: *"Proposals judged to have unacceptable impact on climate change refused"*.
29. As set out below, the EMERGE incinerator proposal would have an unacceptable impact on climate change and should therefore be refused in line with Policy WCS14.

ADVERSE CLIMATE CHANGE IMPACTS OF THE PROPOSAL

30. For the reasons set out below, UKWIN believes that the proposed EMERGE incinerator would have a net adverse climate change impact, as it would result in the release of more greenhouse gasses (GHGs) when compared with sending the same waste to landfill. More generally, the applicant's claims of climate change benefits do not stand up to scrutiny.
31. The applicant attempts to make much of the proposal's supposed climate credentials. For example, in their Pre-Application Request (Appendix 1-1) they boast of the proposed facility's ability to "*Provide low carbon and partially renewable energy, both power and heat, to the future industry and manufacturing uses planned for the site*" (emphasis added).
32. However, the proposal is modelled on an assumption of high carbon intensity, and is reliant on fossil fuels such as plastic for feedstock. The likelihood of exporting significant quantities of heat is 'uncertain' at best.
33. Furthermore, the applicant has not demonstrated that their proposed EMERGE incineration facility has been sized and located so as to minimise travel distances and the associated climate change impacts of road transport.
34. As can be seen from UKWIN's section on need (below), the proposed EMERGE incinerator could be reliant upon the importation from outside the County of significant quantities of non-local waste which would be transported over considerable distances, potentially passing one or more incinerators en route.
35. The applicant's assessment acknowledges how the incinerator could deliver a worse climate outcome than sending the same material, untreated, to landfill.
36. The applicant's Environmental Statement (ES), Volume 3, Appendix 8-4 (Carbon Assessment and Sustainability) includes Table 18: Sensitivity to assumptions regarding sequestration and DDOC, which shows that the proposal could result in a net disbenefit of being between 19,019 tonnes of CO₂ per annum worse than sending waste to landfill under a 'Low NCV' feedstock and 27,718 tonnes of CO₂ per annum worse than landfill under the 'Expected NCV' feedstock.
37. Whilst the applicant tries to argue that these scenarios are somehow 'pessimistic', there are actually grounds to conclude that the applicant's assumptions are overly optimistic, and that actual adverse impacts could be significantly more than 28,000 tonnes of CO₂ per annum worse than landfill.
38. For example, the applicant invites us to assume that the waste used as a comparator would be sent untreated directly to landfill without first being bio-stabilised. This is implausible as the treatment of this material is far more likely to be in line with the Government's move to Net Zero by 2050, meaning waste would be bio-stabilised prior to landfill.

39. Bio-stabilisation renders material virtually inert, meaning hardly any methane would be emitted, and the overwhelming majority of biogenic carbon would be sequestered (in line with Defra analysis¹).

40. Furthermore, the applicant's use of CCGT as their comparator for the purpose of assessing the carbon intensity of the displaced energy unfairly favours incineration relative to using an assumption that is consistent with Government guidance to use the Marginal Emissions Factor (MEF).²

41. At Paragraph 4.8.2 of their Main Report (ES Volume 1) the applicant states:

"Decarbonisation of an energy recovery facility such as the Proposed Development can be achieved via either decarbonising the waste fuel or capturing CO₂ from the flue gases arising from combustion, or through a combination of both. The Climate Change Committee (CCC) report supporting the Government's 2050 net zero target recommends specific policy options aimed at reducing both the plastic and biogenic content of waste, which is expected to deliver significant additional decarbonisation of the waste stream when implemented."

42. This raises a number of questions, including:

- If both the Government and the CCC are calling for reductions in both the plastic and biogenic content of waste, what combustible material will be left to be used as feedstock for the EMERGE incinerator?
- Where does the applicant's need analysis reflect a scenario whereby the proposed facility (and potentially other incinerators competing for the same reduced feedstock) avoids up to 100% of plastic and food waste (which currently makes up a significant proportion of the residual waste stream relied upon by all waste incinerators), e.g. with respect to the volume of paper and card that would be available to them from within the WCS Plan Area and within a 2-hour journey from the proposed facility?

43. With respect to the applicant's assumptions that there could be the removal of up to 100% of food waste and up to 100% of plastics from the incoming waste stream, it appears that the applicant is assuming that the EMERGE incinerator could be burning significant quantities of paper and card, i.e. material which could be recycled (or composted) and which in any case is unlikely to rot in landfill (and therefore unlikely to emit methane) even without bio-stabilisation.

¹ 'The Economics of Waste and Waste Policy Waste Economics Team Environment and Growth Economics, Defra, June 2011' states: "MBT (mechanical biological treatment)-landfill provides the best emissions performance in terms of the treatment/disposal of residual waste. It essentially involves landfilling somewhat stabilised wastes with some material recovery. The magnitude of the environmental impact depends on the extent to which the waste is stabilised". Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69500/pb13548-economic-principles-wr110613.pdf

² For details see: <https://ukwin.org.uk/files/pdf/UKWIN-2018-Incineration-Climate-Change-Report.pdf> and the various Government statements set out in that document. This report also sets out the need to account for biogenic carbon sequestration in landfill. Whilst the applicant takes account of biogenic carbon sequestration, e.g. in ES Volume 3, Appendix 8-4, Table 18, they do not do so for their main analysis.

44. It appears that the applicant's need analysis fails to account for the potentially significant impact with respect to feedstock availability implied by their 'potential improvements associated with decarbonisation of the waste stream'.
45. It is also worth noting that in June 2020 the Climate Change Committee (CCC) called for an increase in separate waste collections and in new recycling, anaerobic digestion (AD) and composting facilities, noting that it is important not to "*lock in GHGs or increased risk*" (associated with waste incineration) setting out how increased reuse and increased recycling are needed "*to prevent lock-in of fossil emissions from waste incineration*".³
46. The CCC calls upon the Government to set a target for England of 70% recycling by 2030⁴ and for Local Authority plans to be implemented to go beyond 70% recycling rates by the 2030's.⁵
47. It becomes clear that the CCC does not envisage the need for new waste incineration capacity that would extend its operations beyond 2030 as the way to address greenhouse gas (GHG) emissions.
48. Overcapacity of incineration jeopardises the achievement of the Government's decarbonisation ambitions, and therefore represents an increased risk to the achievement of Net Zero by 2050.
49. In addition to potentially diverting waste from MBT-Landfill and from recycling, there is also the potential that the proposed incinerator could divert residual waste from other incinerators.
50. This prospect is explored in more detail in the section on need (below), but it is relevant to note that the proposed EMERGE incinerator is about a 1 hour's drive from the Bernard Road incinerator in Sheffield and is less than half an hour by car from the Eastcroft incinerator in Nottingham.
51. Both of these operational incinerators are part of vast district heating schemes, meaning that if waste is diverted from these plants it could mean that the feedstock is treated at an electricity-only incinerator when it would otherwise be treated at a combined heat and power (CHP) plant. Such a situation would be highly undesirable from a climate change perspective.
52. The applicant's references to carbon capture technology are not accompanied by a commitment, e.g. a suggested planning condition or unilateral undertaking. They appear to be reliant upon the hope of external Government funding that has not been secured and is not on offer.

³ Page 156 of '*Reducing UK emissions: Progress Report to Parliament*', June 2020. Available from: <https://www.theccc.org.uk/wp-content/uploads/2020/06/Reducing-UK-emissions-Progress-Report-to-Parliament-Committee-on-Cli.-002-1.pdf>

⁴ *Ibid.*, page 34

⁵ *Ibid.*, page 58

53. A recently-released report from Catapult indicates that the cost of retrofitting carbon capture technology to a 350,000 tonne per annum waste incinerator could cost around £100m to install and a further £4m per annum to operate, which would equate to around £220m over the 30-year lifetime of a typical incinerator.⁶

54. The Carbon Capture report also states that: *"...In the case of EfW, the capture plant does lose some ability to export power and therefore loses some revenue"*. The applicant failed to model the reduced level of electricity export associated with such a retrofit.

55. In addition to the cost implications and the power export reduction, there are further risks and potential impacts associated with retrofitting carbon capture technology to EfW plants. For example, on pages 11 and 12 of their report Catapult identifies a series of 'Negative factors' for consideration, such as:

"Susceptibility to feedstock 'Impurities': The CCUS [carbon capture utilisation and storage] solvent is susceptible to degradation from many types of contaminant. It is not yet known if EfW flue gas when operated at full scale over long periods produces problems of this type. This technology risk is likely to have a negative impact on investment appetite, until operational experience is gained."

56. On page 24 of the applicant's Carbon Assessment (Appendix 8-4) we read:

- *"The carbon capture plant requires a significant amount of energy, in the form of steam, for the regeneration of the solvent and liberation of the product CO₂. The final compression and treatment (for pipe transport or liquefaction) of captured CO₂ also requires significant electrical power.*
- *"Finally, there will also be increases in cooling demand, water consumption and other utilities. There will also be additional consumption of other chemicals. The exact magnitude of these increases will depend on the capture process used and the extent of integration with the power island.*
- *"It should also be said that the application of post combustion capture is not widespread, and in particular not on waste fired plant, so there may some risks associated with excessive consumption of solvents used, due to trace constituents in the flue gas, and potentially also plant corrosion. These facets would require further investigation."; and*

⁶ 'Energy from Waste Plants with Carbon Capture - A Preliminary Assessment of Their Potential Value to the Decarbonisation of the UK', Catapult Energy Systems, May 2020. Available from: <https://es.catapult.org.uk/reports/energy-from-waste-plants-with-carbon-capture/>

- *"The capital cost of a capture plant would add significantly to that of the overall development. For context, the ROAD project, one of Europe's furthest developed CO₂ capture projects and which was developed by Uniper in joint venture, would have cost between €185 million and €230 million in 2017 (plus Owner's costs), for a plant sized to capture 169 tphCO₂ (with perhaps an additional 25–55 % of other integration costs). A smaller scale system, of the size required for the Proposed Development, might be relatively more costly due to economies of scale. However, at this scale the potential is opened up to make greater use of modularisation in design and build, and perhaps of common plant item designs.*
- *"Operating costs are also significant for CCS plant. When taking into account the maintenance, staffing, chemicals and energy costs (the latter being the greatest), based again on the ROAD project, the operating costs might be in the region of €25/teCO₂. These costs are discussed further in the ROAD close-out report [18]. Further additional costs might be incurred for use of a CO₂ transport system and storage, if not sold to the industrial sector."*

57. The conclusions to be drawn from the applicant's statements regarding the prospect of 'decarbonising' their proposed incinerator is that the opportunities they cite rely upon factors outside of their control; that these 'opportunities' are accompanied by adverse impacts and other implications that have not been fully assessed by the applicant; and that the process could require substantial financial investment that to date no party has offered to provide.

58. This means that the applicant's fanciful decarbonisation claims should be afforded little or no weight in the planning balance. This also means that serious concerns about the proposal's compatibility with Net Zero 2050 should weigh heavily against the proposal, especially as they are seeking permanent planning permission for a development which could operate well beyond 2050.

59. One possibility is that the applicant could transform their application into one for temporary planning permission until 2040, with the option of applying for an extension to this consent were they able to find a workable and viable means by which to be consistent with the Government's commitments to meet the legally binding Net Zero 2050 target, abide by the Paris Climate Agreement, and decarbonise the electricity supply.

60. The aforementioned Catapult report explains how: *"In terms of sustainability, unabated EfW power plants produce power of carbon intensity around 600g/kWh (excluding biogenic carbon). This is about 50% higher than a typical CCGT, and already higher than the current grid average intensity which is around 220 g/kWh. Assuming that the decarbonisation of the power sector continues as expected, by 2030 the carbon intensity of unabated EfW will be significantly higher than grid average, further weakening their attractiveness".*

61. At 4.2.1 of the applicant's ES Volume 3, Appendix 8-4 (Carbon Assessment and Sustainability) the applicant concedes that their facility would be a high-carbon development when compared with CCGT, offering carbon intensity figures for the EMERGE incinerator of "*around 560 gCO₂/kWh*" which they acknowledge is "*higher than CCGTs (349 gCO₂/kWh)*".
62. As shown in Table 19 of the applicant's ES Volume 3, Appendix 8-4, even if all of the food and plastic were to be removed from the EMERGE incinerator's feedstock, the carbon intensity of the energy generated by the incinerator (379 gCO₂/kWh excluding biogenic CO₂) would still be higher than CCGT.

THE NEED OR OTHERWISE FOR THE PROPOSED CAPACITY

63. The EMERGE planning application overestimates levels of future residual waste arisings and underestimates residual waste treatment capacity. It fails to adequately explore the locational, waste hierarchy and feedstock implications of the likely future waste context.

Residual waste arisings

64. At pages 16 and 17 of the Planning Statement the applicant claims that:

"The 70 % recycling target, whilst admirable, is proving elusive...there would need to be significant financial investment (at a time when local authorities are under severe economic pressure) and radical policy intervention to materially increase recycling levels."

65. Firstly, we note that in October 2013 the Local Plan Inspector Susan Holland found that:

"The overall target of adopted by the WCS [Waste Core Strategy] for the recycling or composting of 70% of municipal, commercial & industrial, and construction & demolition waste by 2025 is balanced and realistic."

66. Secondly, we note that the Government is bringing forward what the applicant refers to as *"significant financial investment...and radical policy intervention to materially increase recycling levels"*.

67. The most recent document to reaffirm this Government commitment is the draft replacement Waste Management Plan for England (WMPE), released for consultation on 20th August 2020.⁷

68. The main replacement WMPE document states:

"In February 2019 the Government published a consultation on measures to increase recycling from households and businesses to support the achievement of a much higher 65% recycling rate for municipal waste by 2035. Consultation on these proposals closed on 13 May 2019 and Government published a summary of its response to the consultation on 23 July 2019. This states that, the Government will introduce measures for England to increase household recycling by requiring all local authorities to collect a consistent set of dry materials from households in England; to collect food waste separately from all households on a weekly basis; and to arrange for garden waste collection where necessary. These measures are expected to increase recycling from households from current levels to 65% by 2035. This will support our ability to meet commitments on recycling outlined in the Resources and Waste Strategy." (emphasis added)

⁷ https://consult.defra.gov.uk/waste-and-recycling/waste-management-plan-for-england/supporting_documents/Waste%20Management%20Plan%20for%20England.pdf

69. According to Defra's associated Environmental Report⁸ the draft 2019 WMPE contains "*explicit commitments, drawn from other document such as the RWS [Resource and Waste Strategy]*" and lists these, including:

- "We will continue to work with local authorities [Environment Report's underlining] to increase household recycling in the short-term to achieve 50% by 2020." (page 12)
- "The Government will introduce measures for England to increase household recycling by requiring all local authorities to collect a consistent set of dry materials from households in England; to collect food waste separately from all households on a weekly basis; and to arrange for garden waste collection where necessary. These measures, together with reforms to municipal business recycling are expected to increase municipal recycling from current levels to 65% by 2035." (page 21)
- "We have committed to funding the net costs of new burdens on local authorities arising from new statutory duties introduced to increase consistency in recycling and we will work with local government bodies to develop our assessment of costs and changes necessary." (page 39)

70. As such, the Government intends to bring in new measures to boost recycling, and they have committed to funding these measures (both directly and through schemes such as extended producer responsibility), and the Government expects these measures will result in 65% recycling for municipal waste in England by 2035.

71. Some of these measures have already been published in draft form, e.g. in the Environment Bill.

72. As noted above, in June 2020 the CCC recommended that the Government adopt a more ambitious target of 70% recycling by 2030.

73. The same CCC report also notes, on page 183, that:

"Achieving significant emission reductions in the waste sector requires a step-change towards a circular economy, moving away from landfill and incineration (and the associated methane and fossil CO₂ emissions), and towards a reduction in waste arisings and collection of separated valuable resources for re-use and recycling. This applies at local, regional and national levels." (emphasis added)

74. In the House of Commons on 28th March 2019 John Grogan MP questioned Michael Gove, saying:

"Most studies now indicate that we have an excess of incineration capacity to deal with residual waste. Is there not a danger that, if we build more incinerators, waste that would otherwise be recycled will be diverted to those incinerators?" and the then Environment Secretary acknowledged this by responding: *"That is a fair point".*

⁸ https://consult.defra.gov.uk/waste-and-recycling/waste-management-plan-for-england/supporting_documents/Environmental%20Report.pdf

75. On 12th September 2018 the UK Government's Resource Minister Thérèse Coffey gave oral evidence to the Environmental Audit Committee where she stated:

- *"...the [European] Commission itself is very concerned about the explosion, if you like, of incineration around the European Union. It does not want to massively encourage it in the future. Some countries incinerate almost all of their waste, or they are reaching that very high level. I am not convinced that in respecting the waste hierarchy, we want to massively increase the amount of incineration that we are doing..."*
- *"I think, actually, there is sufficient capacity out there for incineration. Often what happens with policies is that they come out with unintended consequences. The general view I get from the [European] Commission in the report they did is that we now have too much incineration across the European Union, and we need to do more to refocus on recycling..."*

76. On 28th January 2020 Rebecca Pow, speaking on behalf of the Government as the Parliamentary Under-Secretary of State for Environment, Food and Rural Affairs, told a Westminster Hall debate:

"...we seek to minimise the amount of waste that goes to incineration or landfill"⁹

77. On 12th February 2020 Rebecca Pow, speaking on behalf of the Government as the Parliamentary Under-Secretary of State for Environment, Food and Rural Affairs, told a Westminster Hall debate:

"...the measures in the resources and waste strategy and the Environment Bill will enable a paradigm shift, in relation to reducing, reusing and recycling our waste, that should limit the amount that ever has to go to incineration and landfill. I hope that, from what I have said, hon. Members understand what is happening, the direction that the Government are absolutely committed to, and the move to a circular economy." (emphasis added)

78. As such, not only has the Government confirmed their commitment to, and expectation of achieving, a 65% recycling target, but they acknowledge that it is fair to say that incineration overcapacity has the potential to harm recycling.

79. Indeed, in recognition of the ability of incineration to come at the expense of recycling, the Government has warned that if their proposed measures are unsuccessful then they will consider introducing an incineration tax to divert waste from incineration to recycling.

⁹ Hansard - Westminster Hall debate on Industrial and Commercial Waste Incineration (UK Parliament, 28 January 2020). Available from: <https://hansard.parliament.uk/Commons/2020-01-28/debates/9209AD6A-6C6B-47CB-A460-5147EC43131F/IndustrialAndCommercialWasteIncineration>

80. To quote the Government's October 2018 budget: "...the government wants to maximise the amount of waste sent to recycling instead of incineration and landfill. Should wider policies not deliver the government's waste ambitions in the future, it will consider the introduction of a tax on the incineration of waste..."¹⁰ (emphasis added)

81. This position has subsequently been restated and reaffirmed by various Government ministers.

82. The link between recycling underperformance and an intervention relating to discouraging incineration is not surprising, as a significant proportion of the current residual waste stream used as incinerator feedstock is recyclable, and much of the non-recyclable elements in the residual waste stream are substitutable.

83. According to Defra's August 2020 report entitled 'Resources and waste strategy for England: monitoring and evaluation':¹¹

- "The large amount of avoidable residual waste and avoidable residual plastic waste generated by household sources each year suggests there remains substantial opportunity for increased recycling."
- "The message from this assessment is that a substantial quantity of material appears to be going into the residual waste stream, where it could have at least been recycled or dealt with higher up the waste hierarchy."
- "Of total residual waste from household sources in England in 2017, an estimated 53% could be categorised as readily recyclable, 27% as potentially recyclable, 12% as potentially substitutable and 8% as difficult to either recycle or substitute."
- "Of approximately 13.1 million tonnes of residual waste generated by household sources in England in 2017, around 7 million tonnes could be categorised as readily recyclable, 3.5 million tonnes as potentially recyclable, 1.6 million tonnes as potentially substitutable, and 1.0 million tonnes as difficult to recycle or substitute. All figures are estimates."

84. A Welsh WRAP study similarly found that up to nearly 77% of residual Commercial & Industrial (C&I) waste in Wales in 2019 could have been recycled, stating:

"The majority of the [residual C&I] waste analysed (74.5% (+/- 2.4%) or 450,478 tonnes annually) could have potentially been recycled".¹²

¹⁰ Available from:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/752202/Budget_2018_red_web.pdf

¹¹ Available from: <https://www.gov.uk/government/publications/resources-and-waste-strategy-for-england-monitoring-and-evaluation>

¹² Available from: <http://www.wrapcymru.org.uk/reports/composition-analysis-commercial-and-industrial-waste-wales>

Residual waste treatment capacity

85. The applicant has adopted a 2-hour isochrone for their feedstock availability assessment.
86. It should be noted that, generally speaking, 1 tonne of Refuse Derived Fuel (RDF) requires the dewatering of approximately 1.33 tonnes of 'raw' waste.
87. At Paragraph 2.4.31 of the Main Report of the applicant's Environmental Statement (Volume 1) we read how the applicant undertook a search "*on the Planning Inspectorate website to identify...any Nationally Significant Infrastructure Projects (NSIPs)*".
88. The applicant's NSIPs search failed to identify the proposal for the Boston Alternative Energy Facility (BAEF). It should be noted that the proposed BAEF would be located circa 1 hour and 40 minutes away from the proposed EMERGE incinerator, and that the Boston facility would be capable of processing 1 million tonnes of RDF¹³ (which would require the dewatering of approximately 1,330,000 tonnes of 'raw' waste) to generate 102MW of energy (gross).
89. The applicant's NSIPs search also failed to identify the proposal for the North Lincolnshire Green Energy Park. It should be noted that the proposed North Lincolnshire Green Energy Park would be located circa 1 hour and 30 minutes away from the proposed EMERGE incinerator, and that the North Lincolnshire facility would be capable of processing 650,000 tonnes of RDF¹⁴ (which would require the dewatering of approximately 865,000 tonnes of 'raw' waste) to generate 95MW of energy (gross).
90. Additionally, the applicant's NSIPs search also failed to identify the award of planning permission for Ferrybridge Multifuel 2 (FM2), a Development Consent Order for which was approved in October 2015.¹⁵ Both FM2 and FM1 are located in Knottingley, circa 1 hour and 30 minutes away from the proposed EMERGE incinerator. FM1 and FM2 have a combined capacity of 1.35 million tonnes of waste (primarily as RDF and/or SRF - which would require the dewatering of approximately 1,800,000 tonnes of 'raw' waste) with a combined electrical generating capacity of 180MW (gross).
91. Therefore, with respect only to NSIPs, the applicant seems to have failed to identify existing and emerging incineration capacity to treat approximately 2.67 million tonnes of waste across three locations all of which are within the applicant's 2-hour isochrone. The applicant's failure to identify these substantial and obviously relevant Nationally Significant Infrastructure Project proposals casts further doubt regarding the applicant's claim that the capacity they are proposing for the EMEGRE incinerator is needed to divert waste from landfill.

¹³ See: <https://infrastructure.planninginspectorate.gov.uk/projects/north-east/boston-alternative-energy-facility-baef/?ipcsection=overview> and: <https://www.bostonaef.co.uk/>

¹⁴ See: <https://infrastructure.planninginspectorate.gov.uk/projects/yorkshire-and-the-humber/north-lincolnshire-green-energy-park/> and: <https://northlincolnshiregreenenergypark.co.uk/>

¹⁵ See: <https://infrastructure.planninginspectorate.gov.uk/projects/yorkshire-and-the-humber/ferrybridge-multifuel-2-fm2-power-station/> and: <https://multifuelenergy.com/>

92. In addition to this NSIP capacity, there is nearly a further 5 million tonnes of existing incineration capacity within the applicant's 2-hour isochrone. Facilities included in this circa 5 million tonne figure are listed in the following table:

Incinerator	Location	Distance from NG11 0EE	Capacity
Newhurst Energy Recovery Facility (under construction)	Newhurst Quarry, Shepshed (near Loughborough)	Less than 30 minutes	350,000
Baddesley Energy from Waste Facility	Off Merevale Lane, Baxterly, Atherstone	Less than 40 minutes	103,000 (RDF) 137,000 raw waste
Stoke Energy from Waste Facility	Campbell Road, Sideway, Stoke-on-Trent	Less than 1 hour 30 minutes	210,000
Kirklees Energy from Waste Facility	Vine Street, Huddersfield, Kirklees	Less than 2 hours	210,000
Newlincs Grimsby Incinerator	South Marsh Road, Stallingborough, Grimsby	Less than 2 hours	56,000
Lincolnshire Energy from Waste Facility	Whisby Road, North Hykeham, Lincoln	1 hour	190,000
Peterborough CC EFW Plant	Fourth Drove, Fengate, Peterborough	1 hour 30 minutes	85,000
Greatmoor EfW	Lower Greatmoor Farm, Edgcott, Aylesbury	Less than 2 hours	345,000
Staffordshire ERF	The Dell, Enterprise Drive, Four Ashes near Cannock	1 hour	340,000
Sheffield ERF	Bernard Road, Sheffield	1 hour	245,000

Battlefield ERF	Battlefield Enterprise Park, Shrewsbury	1 hour 30 minutes	102,000
Runcorn EFW Facility	Picow Road Farm, Weston Point, Runcorn	Less than 2 hours	1,100,000
Dudley Energy from Waste Facility	Lister Road, Dudley	Less than 1 hour 30 minutes	105,000
Wolverhampton Energy from Waste Plant	Crown Street, Wolverhampton	Less than 1 hour 30 minutes	118,000
Tysely Energy from Waste Facility	James Road, Tyesley, Birmingham	Less than 1 hour 30 minutes	400,000
Coventry ERF	Bar Road, Coventry	1 hour	315,000
Milton Keynes Waste Recovery Park	Dickens Road, Old Wolverton	1 hour 45 minutes	93,600
Ardley EFW Plant,	Ardley, Oxfordshire	1 hour 30 minutes	326,300
Javelin Park	Javelin Park, Haresfield	2 hours	190,000

93. The facilities listed in the table above do not include all of the emerging incinerators currently under construction within a 2-hour isochrone of the proposed EMERGE incinerator.

94. In their Planning Statement, at Paragraphs 3.3.13 and 3.3.26, the applicant refers to a Tolvik study published in February 2019. This document is not available in the public domain and is not included with the current planning application. As such, no weight should be given to this document in the planning balance.

95. At Paragraph 3.3.28 of their Planning Statement, the applicant refers to a Tolvik study that they commissioned, as follows:

"...Uniper commissioned Tolvik to carry out a residual waste market review to evaluate the availability of waste using a circa 2-hour drive time catchment area from the Power Station site. This review concluded that there is forecast to be a 1.52 million tpa residual waste treatment capacity gap in 2035 (under a Median scenario), based on forecast residual waste arisings and known EfW facilities either fully operational or under construction"

96. This statement raises some obvious questions, not least questions about where this review can be found, and when was it conducted, the full set of inputs and assumptions that were made to inform the study, and any caveats or cautions acknowledged by the authors of the study.

97. As the Tolvik study referred to at Paragraph 3.3.28 of the Planning Statement is not available for scrutiny, no weight should be given to the study's partially-quoted conclusion in the planning balance.

98. The study was carried out by Tolvik. As such it may be relevant to note the recently published article written by Tolvik's Director, Adrian Judge.

99. The opinion piece, published on the 19th August 2020 on the *letsrecycle.com* website¹⁶, includes the following:

"...it increasingly appears that there is one critical skill necessary for a successful project which is being overlooked: 'understanding'... Above all, understanding is the thoughtful application of common sense...Tolvik is regularly asked to assess the future balance between Residual Waste supply and EfW capacity. To date we have assumed that the checks and balances of rational investors, particularly where external project finance is required, will ensure that, unlike northern Europe, the risk of EfW over-capacity in the UK is very low. However, increasingly, project developers seem willing to ignore the need for 'understanding' if it is going to give them the wrong answer.

" We see this with our market due diligence reports. As the market tightens, if our analysis is not favourable then we are increasingly being asked to change our assumptions. Most often this is a variant of 'can't you just increase the size of the modelled Catchment Area?' Having engaged experienced independent consultants, this appears to be a deliberate decision to redefine 'understanding'...But ignoring this need for 'understanding', when repeated across multiple projects, is starting to lead us to question whether the risk of EfW over-capacity is as low as we had previously assumed."

100. Given that the EMERGE applicant has opted for a 2-hour isochrone, instead of the more usual 1-hour isochrone, it would be reasonable to conclude that the facility proposed for Ratcliffe-on-Soar would be incapable of sourcing sufficient feedstock within a 1-hour isochrone.

¹⁶ See: <https://www.letsrecycle.com/news/latest-news/understanding-risk-efw-overcapacity/>

101. As demonstrated above, once the feedstock catchment area is extended to a 2-hour drive then whilst of course more feedstock becomes theoretically available, a much larger number of existing and emerging incinerators can be said to be competing for that same feedstock.
102. Returning to the national picture, in their ES Volume 1 Main Report, at Paragraph 1.2.8, the applicant states:
- "The Proposed Development would make an important contribution to the acknowledged shortfall in waste recovery capacity within the United Kingdom (UK). This shortage is resulting in approximately 11 million tonnes per annum (2018) [Footnote 1: 'Approximate figure calculated from Tolvik Consulting – UK Energy from Waste Statistics – 2018 (June 2019).'] of residual waste, capable of being subject to energy recovery, being sent to landfill."*
103. This outdated claim is based on Tolvik's 2018 figures. The UK waste statistics for 2019 are now available, and these show higher levels of domestic incineration capacity than in 2018. The more recent Tolvik report¹⁷ notes that:
- "In 2019 the tonnage of Residual Waste processed at EfWs in the UK was up 9.9% when compared with the previous year to 12.6 Million tonnes."*
104. Importantly, the quantity of waste incinerated in a given year does not reflect the capacity which is available, in commissioning and under construction.
105. According to Tolvik, in December 2019 across the UK there were:
- 48 fully operational incineration facilities, with a headline capacity of 14.60 million tonnes per annum;
 - 5 incinerators in late stage commissioning, with a headline capacity of 0.80 million tonnes per annum; and
 - 12 incineration facilities in construction, with a headline capacity of 3.10 million tonnes per annum.
106. This adds up to 18.50 million tonnes of headline capacity in the UK based on existing facilities as of December 2019.
107. Furthermore, in addition to waste currently being exported and being landfilled potentially going to this 18.50 million tonnes of existing incineration capacity, as stated above much of the residual waste currently being sent for incineration or landfill could be recycled or composted.
108. The applicant has not demonstrated that there is any feedstock catchment area that can justify the proposed capacity and location of the EMERGE incinerator.
109. As such, the applicant has failed to demonstrate a need for the proposed incineration capacity.

¹⁷ Available from: <https://www.tolvik.com/wp-content/uploads/2020/05/Tolvik-UK-EfW-Statistics-2019-Report-June-2020.pdf>

110. As set out above, the applicant has not ruled out the prospect that the EMERGE incinerator would be required to use as feedstock material that could and should be recycled or composted, and the applicant has not demonstrated that their proposal would be compatible with short-, medium- and long-term local and national recycling and waste minimisation targets.

Impacts of decarbonisation on residual waste arising and treatment capacity

111. As set out above, according to the applicant's Climate Change and Sustainability Assessment, the move to Net Zero by 2050 could result in significant reductions of both plastic and food waste in the residual waste stream.

112. According to the applicant's ES Volume 3 Appendix 8-4 analysis, as shown in Table 19: 'Impact on emissions of reducing food and plastic content of incoming waste', the calorific value of the feedstock could fall in the future due to ongoing decarbonisation of the residual waste stream.¹⁸

113. Such a drop in CV would increase the treatment capacity of all incinerators, not just the EMERGE incinerator. This would result in an increase in incineration capacity accompanied by a reduction in available feedstock for all waste incinerators.

114. The applicant fails to model this eventuality, despite raising the prospect of 'potential improvements associated with decarbonisation of the waste stream' that could bring about this sort of situation.

¹⁸ This fall in CV can be determined by dividing the estimated CO₂ by the estimated carbon intensity, and this shows that the MWh would drop from 342,081 to 326,798 with the change in feedstock. Although not noted by the applicant in Table 19, this drop in CV would actually necessitate more waste to be imported in line with their analysis of Low NCV waste in Table 1 of Appendix 8-4: Carbon Assessment and Sustainability.

ADVERSE VISUAL AMENITY IMPACTS OF THE PROPOSAL

115. Whilst UKWIN will leave detailed evidence regarding the adverse visual amenity impacts, including adverse impacts on the Green belt, to other consultees, we would like to draw attention to a number of relevant planning decisions in this regard.

116. The planning application made by AmeyCespa (East) Limited for an incinerator to be built at land at Levitt's Field, Waterbeach Waste Management Park, Ely Road, Cambridgeshire (PINS Ref 3225123) was refused by the Secretary of State on the 15th of June 2020. According to the Decision Letter¹⁹:

"...the Secretary of State agrees with the Inspector...that the proposed development would have an adverse effect on the character and appearance of the area, and that this brings the proposal into conflict with SCLP Policies NH/2, HQ/1, and objective b. of SCLP Policy S/2. He further agrees that the proposal would also conflict with the Waste SPD and be at odds with the objective of SCDC's Landscape in New Developments SPD March 2010..."

117. The planning application made by Veolia ES (Hertfordshire) Limited for an incinerator to be built at land at 2 Ratty's Lane, Hoddesdon, Hertfordshire (PINS Ref 3195373), was refused by the Secretary of State on the 19th of July 2019. According to the Decision Letter²⁰:

"The Secretary of State considers that the significant adverse landscape and visual impacts, which as well as being in conflict with the development plan are also in conflict with emerging plan policies, policies of the Epping Forest Local Plan, policies of the Lee Valley Park Plan, and the Framework, carry considerable weight against the proposal..."

118. The planning application made by Veolia Environmental Services Ltd for an incinerator to be built at land at New Barnfield, Hatfield (PINS Ref 2192045), refused by the Secretary of State on 7 July 2014. According to the Decision Letter:

"The Secretary of State considers that substantial weight should be given to the Green Belt harm by reason of inappropriateness. He considers that the harm to the openness of the Green Belt is real and he gives substantial weight to this harm. He also gives weight to the harm to the perception of a gap between Hatfield and Welham Green in line with the Green Belt aim to prevent neighbouring settlements merging into one another. The Secretary of State considers that there is further significant harm to the character and appearance of the area, and to the amenity of residents and users (particularly the enjoyment of the countryside, the footpath and cycle network, and the outlook from the most affected properties).

¹⁹ Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/892192/Combined_DL_IR_R_to_C_Levitts_Field.pdf

²⁰ Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/819027/19-07-19_DL_IR_Addendum_Rattys_Lane_3195373.pdf

"He considers that there would be significant (though less than substantial) harm to the setting of the ensemble of heritage assets at Hatfield House and Park, and he attaches considerable weight and importance to this harm. Due primarily to the scale of the development, the Secretary of State considers that the mitigation proposals would not be fully effective in mitigating these impacts; that this harm would endure for at least the life of the scheme (c. 25 years); and that the existence of such a large building would be a material factor in considering the future potential of the site at that time...he agrees with the Inspector's conclusion that the very special circumstances necessary to justify the development do not exist..."