Comments on any other information submitted at D3

UKWIN'S D4 COMMENTS ON REP3-022 & REP3-040

(REP3-022: NLGEPL'S D3 COMMENTS ON UKWIN'S D2 WR AND D2 COMMENTS ON THE RDF SUPPLY ASSESSMENT REV 1, & REP3-040: RDF SUPPLY ASSESSMENT REVISION 2)

Proposed Development:

North Lincolnshire Green Energy Park

Proposed Location:

Flixborough Wharf, Flixborough Industrial Estate, North Lincolnshire

Applicant:

North Lincolnshire Green Energy Park Limited

Planning Inspectorate Ref:

EN010116

Registration Identification Ref:

20031828

FEBRUARY 2023

United Kingdom Without Incineration Network

INTRODUCTION

1. It is noted that the Applicant's comments focused on the summary of UKWIN's case. These comments pre-date UKWIN's Deadline 3 submissions, and in many instances the Applicant's REP3-022 comments fail to respond to the substance of UKWIN's case.
2. Furthermore, some of the issues regarding overcapacity are expected to be overtaken by events e.g. by the forthcoming Statement of Common Ground (SoCG) which is expected to take account of Government targets including the interim targets set out in the Environmental Improvement Plan 2023.
3. However, where UKWIN believes that it would be helpful to the Examination, we have set out responses to the Applicant's REP3-022 comments on UKWIN's Written Representation (WR) and comments on RDF Supply Assessment Revision 1, as well as to the Applicant's REP3-040 RDF Supply Assessment Revision 2.
4. This submission also includes additional information that UKWIN undertook to provide at Deadline 4 as part of ISH3.
5. UKWIN had hoped to agree a robust common position on the balance between arisings and capacity in line with the Examining Authority's ISH3 instructions in time for Deadline 4, and whilst progress has been made to this end, at the time of writing this submission the SoCG remains under discussion.
6. As such, it is necessary to respond to REP3-022 and REP3-040 with respect to some arisings and capacity issues. It is hoped that doing so will help inform both the Examining Authority and the Applicant regarding the basis of UKWIN's position, which we hope will support the SoCG process.

LACK OF NEED, AND RISK OF OVERCAPACITY

Waste arisings

7. For the avoidance of doubt, as discussed at ISH3, UKWIN does not take issue with the Applicant's 2020 residual waste starting point of 22.0 million tonnes (Mt).
8. In Figure 1 of REP3-022 Appendix A AFRY provides a figure for 'Residual waste arisings (Government targets)' that starts at around 22.0 Mt in 2020, but then only falls to around 17.6 Mt in 2030, around 15.8 Mt by 2035 and just over 15 Mt by 2042.
9. AFRY claims in REP3-022 Appendix A that "the base case takes account of the residual waste reduction target announced by DEFRA in December 2022", and Figure 1 calls this "Residual waste arisings (Govt targets)".

10. However, UKWIN does not believe that AFRY's methodology for extrapolating this 2020 residual waste starting point of 22.0 million tonnes into figures for subsequent years accurately reflects a trajectory that is consistent with meeting Government targets, such as the target to halve residual waste by 2042 and the associated interim targets.

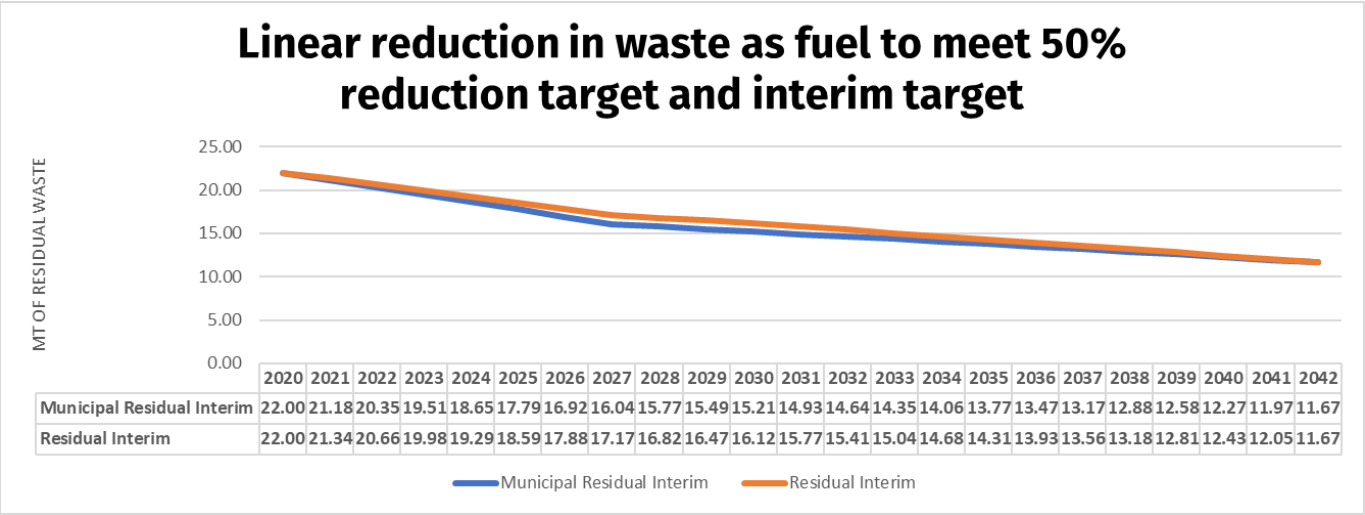
11. This means that either that the Applicant's approach is failing to accurately use 22.0 Mt as a starting point and/or that their approach somehow fails to account for the reductions necessary to meet the Government's targets.

12. Halving the relevant fraction of waste per capita would result in 22 Mt falling to 11 Mt by 2042 if the population remained stable, or 11.67 Mt if population rises in line with ONS population forecasts (assuming the 22 Mt figure for 2020 also applies to the Government's 2019 base year).

13. To meet the Government's 2027 interim target, relevant waste would need to fall to around 16.04 Mt or 17.17 Mt depending on whether the interim target of a 29% reduction in the Municipal Residual Waste or the interim target of 24% reduction in the (Total) Residual Waste (excluding major mineral waste) is applied.

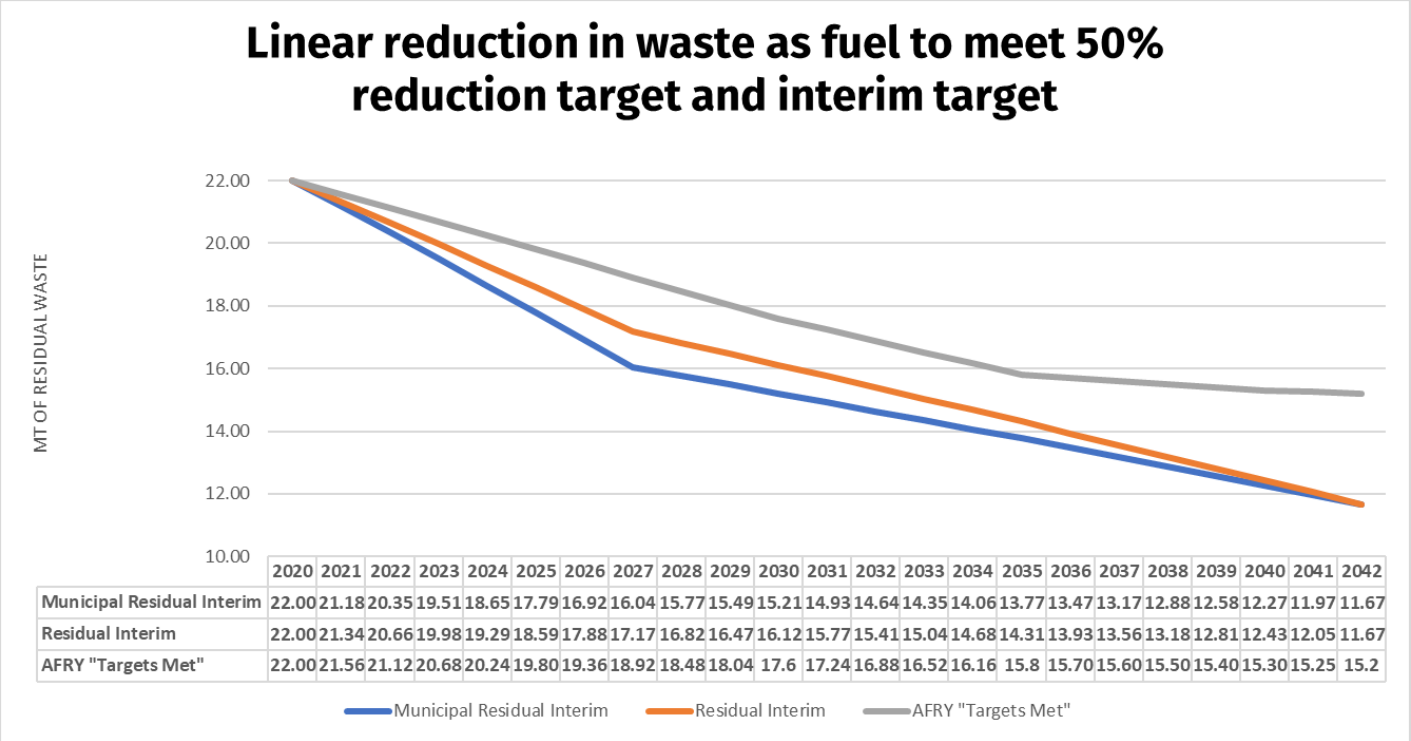
14. UKWIN believes that projections based on the interim target of 29% reduction in the Municipal Residual Waste is the figure that should be adopted on the basis that this category is closer to the relevant potential feedstock that was used to arrive at the 'residual waste available' figure of 22 million and closer to the waste stream that RDF-burning incinerators tend to use as feedstock.

15. Assuming a linear fall between 2020 and 2027, and then another linear fall between 2027 and 2042, would result in waste arisings falling in line with the following chart and table:



	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Municipal Residual Interim	22.00	21.18	20.35	19.51	18.65	17.79	16.92	16.04	15.77	15.49	15.21	14.93	14.64	14.35	14.06	13.77	13.47	13.17	12.88	12.58	12.27	11.97	11.67
Residual Interim	22.00	21.34	20.66	19.98	19.29	18.59	17.88	17.17	16.82	16.47	16.12	15.77	15.41	15.04	14.68	14.31	13.93	13.56	13.18	12.81	12.43	12.05	11.67

16. This can be compared with the latest figures from AFRY (assuming linear reduction of residual waste between 2020, 2025, 2030, 2035, 2040, and 2042) as follows:



	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Municipal Residual Interim	22.00	21.18	20.35	19.51	18.65	17.79	16.92	16.04	15.77	15.49	15.21	14.93	14.64	14.35	14.06	13.77	13.47	13.17	12.88	12.58	12.27	11.97	11.67
Residual Interim	22.00	21.34	20.66	19.98	19.29	18.59	17.88	17.17	16.82	16.47	16.12	15.77	15.41	15.04	14.68	14.31	13.93	13.56	13.18	12.81	12.43	12.05	11.67
AFRY "Targets Met"	22.00	21.56	21.12	20.68	20.24	19.80	19.36	18.92	18.48	18.04	17.6	17.24	16.88	16.52	16.16	15.8	15.70	15.60	15.50	15.40	15.30	15.25	15.2

17. As such, the Applicant's Deadline 3 approach to assessing compliance with Government targets is not consistent with relevant residual waste falling in line with the Government's residual waste reduction targets based on a 22 Mt baseline.

18. In response to AFRY's statements regarding their approach to uncertainty in REP3-022 Appendix A, UKWIN notes that paragraph 70 of UKWIN's Written Representation (REP2-110) highlighted the UK Government's commitment to halving residual waste and the Government's belief that, while ambitious, such reductions were considered achievable based on their evidence base.

19. UKWIN also notes that in the Environmental Targets Consultation Summary of Responses and Government Response dated 16th December 2022, Defra clearly stated that: "Whilst we want targets to be stretching, there is a need for them to be achievable. This is a legal requirement included in the Environment Act 2021, stating that the Department of Environment Food & Rural Affairs Secretary of State must be 'satisfied' the target can be met before making target regulations".

20. Thus, we should be left in no doubt that the Government's position is that their targets are achievable.

Principle of excluding EfW capacity based on its CCS potential

21. The Applicant's third RDF Supply Assessment, Rev 2 of AFRY's RDF Supply Assessment [REP3-040] dated 9th December 2022, repeats the implausible assumption made in earlier versions of the RDF Supply Assessment that entails "Assuming all [incineration] capacity is required to have carbon capture by 2035, to comply with the Net Zero Strategy…"

22. As such, REP3-040 takes no account of UKWIN's comments on electronic pages 12-14 of REP2-108 (paragraphs 48-52) that this assumption fundamentally misunderstands the Net Zero Strategy.

23. As UKWIN noted at D2, the Government's Strategy explicitly states on page 78 that "energy from waste" would be one of the expected "residual emissions", i.e. the Government is not expecting Energy from Waste (EfW) facilities to shut simply because they do not have carbon capture and storage (CCS) by 2035. The relevant extract from the Government's net Zero Strategy accompanies this D4 submission.

24. This misunderstanding appears to have also pervaded AFRY's updated position and the assessment set out in the Appendix A of REP3-022 dated 12th January 2023 [REP3-022], where they quote from page 78 of the Net Zero Strategy that "all our electricity will need to come from low carbon sources" without noting that the Government provided a caveat specifically in relation to residual emissions from EfW later in that same paragraph.

25. In REP3-022 the Applicant repeats their CCS misunderstanding, on internal page 50 (electronic page 54) of their response to UKWIN's WR, referring to "potential closures as a result of the **need** to fit carbon capture in light of the Government target to decarbonise the electricity sector by 2035". (**emphasis ours**)

26. When UKWIN raised our concerns about the Applicant's approach to excluding EfW capacity based on its CCS potential at ISH3 Part 1 on Thursday 26th January 2023, the Applicant appeared to explicitly resile from this position, with Simon Aumonier stating: "This is not a question of government closing incinerators. It's a question of the commercial context…It isn't going to be a government inspector going round and closing them down" [quote taken from EV-029].

27. As such, the Applicant's current position appears to be that the Government would not mandate the shutdown of non-CCS incinerators, but that operators might voluntarily opt to shut down their incinerator for commercial reasons.

28. The Applicant has not demonstrated that this is likely, and it seems implausible to UKWIN that this such a scenario could be considered likely based on current Government policies and the associated market context.

29. Most of the costs of incinerators relate to their construction, which comes with high CAPEX requirements. In contrast, incinerators are said to have relatively modest OPEX costs, especially as many of the operating costs are at least somewhat defrayed from profits arising from the sale of electricity.

30. If incinerators are included in the UK Emissions Trading Scheme (ETS), as is expected, this would encourage CCS technology to be deployed where this can be implemented in an affordable manner, but it is not expected that the UK Government will underwrite all CCS costs for all incinerators with CCS potential, especially beyond the initial demonstrator projects.

31. That is to say, our understanding is that the Government expects the benefit of avoiding UK ETS charges to provide a financial incentive that would partially defray the costs associated with investing in CCS.

32. While operators that do not operate full CCS might have increased costs associated with paying their share of the UK ETS, they would not have a strong incentive to shut down completely as doing so would not pay off the CAPEX costs of the incinerator.

33. Even if operators of non-CCS incinerators face commercial pressure to reduce their gate fees, they would have avoided the cost of retrofitting CCS, and they might be able to export more electricity by avoiding the electricity penalty associated with CCS demand being added to the parasitic load.

Impact of including EfW capacity without CCS potential

34. While the Applicant's 12th January 2023 submission [Appendix A of REP3-022] updates the Applicant's 9th December 2022 calculations to take account of the Rivenhall capacity and other acknowledged omissions, it only shows the impacts in terms of capacity assessed to have CCS potential.

35. As such, no assessment is made by the Applicant of the capacity situation that would be the case were some or all of the existing EfW capacity that does not have CCS potential to continue to operate.

36. It is notable that REP3-040 Figure 9 shows that with a recycling rate of 68% (depicted as a brown line), currently operational R1 EfW capacity combined with capacity that is currently under construction or in commissioning exceeds the quantity of residual waste arising by 2029/30 (without inclusion of the proposed North Lincolnshire capacity). This indicates that there is no national (English) 'capacity gap' to fill.

37. REP3-040 Figure 10 indicates that regional capacity of existing R1 EfW facilities in Yorkshire & Humber and the East Midlands is very close to the expected levels of waste arisings in the 65% and 68% recycling scenarios.

38. Figures 9 and 10 do not include:
    a) 595ktpa of capacity at Rivenhall (which is outside the region but relevant to national EfW capacity)
    b) Co-incineration capacity, e.g. cement kilns
    c) The impact of halving residual waste per capita by 2042 and the Government's associated interim targets (as set out in the Environmental Improvement Plan 2023)
    d) The full capacity for some of the incinerators on their list
    e) Non-R1 EfW capacity
    f) Aging capacity that could be refurbished (e.g. Stoke, Coventry)
    g) Waste that can be expected to be used to meet the Government's Jet Zero Strategy (for the production of Sustainable Aviation Fuel)
39. As such, the fact that the Applicant's own evidence shows that the proposed North Lincolnshire incinerator appears not to be needed even before the above-listed matters are taken into account should be given significant weight.
40. Subsequent to the submission of REP3-040, the Applicant provided analysis in REP3-022 that takes account of Rivenhall, includes 375kte per annum for cement kilns (although UKWIN would say the figure should be higher, as we noted at ISH3), and includes 378kte of accepted underestimated capacity.
41. The REP3-022 analysis also includes estimates showing the impact of halving residual waste by 2042 (but not the impact of meeting the newly announced interim target).
42. While the Applicant's latest analysis in REP3-022 is an improvement in some respects, the Applicant's analysis is fatally undermined by the failure to adequately address issues b-g above and by the exclusion of capacity categorised by the Applicant as having no CCS potential.
43. The Applicant's exclusion of capacity categorised as having no CCS potential hides the fact that if more of the existing incineration capacity is considered then there would be both regional and national incineration overcapacity if Government recycling targets are met.
44. UKWIN has attempted to correct for this by combining information contained in REP3-0404 and REP3-022, as set out overleaf.

45. **Impact of including non-CCS R1 capacity**

Parameter	Value (ktpa)	Approx Cumulative (ktpa)	Source
Currently operating R1 EfW capacity (exc. Rivenhall) and MBT Removal	Circa 17,500	17,500	REP3-040 Figure 9 (electronic page 45)
Acknowledged Rivenhall capacity	+595	18,095	REP3-022 electronic page 133 & REP3-040 Table A8 (electronic page 69)
Acknowledged Under-statement of capacity at existing facilities	+378	18,473	REP3-022 Appendix A electronic page 133
Acknowledged cement kiln capacity	+375	18,848	REP3-022 Appendix A electronic page 134
Total capacity in 2035		**18,848**	

46. This figure of 18,848 ktpa of Applicant-acknowledged English residual waste treatment capacity can be compared with the estimated amount of available waste in 2035 as set out by the Applicant in Figure 1 of REP3-022 Appendix A on electronic page 133, to calculate an implied level of incineration overcapacity for 2035 (in the event non-CCS incineration capacity is not shut down) as follows:

Residual waste arisings scenario	Applicant Feedstock Estimate (Ktpa)	Implied level of incineration overcapacity in 2035 without NLGEP (Ktpa)
60% household recycling by 2042	18,000	**848**
Govt targets	16,000	**2,848**
CCC recommended targets	15,000	**3,848**

47. The above table shows how, using the Applicant's own figures, we can expect that by 2035 there would be a national (English) level of overcapacity ranging from around 848 ktpa to 3,848 ktpa without the capacity proposed for North Lincolnshire, rising to between 1.6 mtpa and more than 4.6 Mtpa if the NLGEP treats 760 ktpa of waste per annum.

48. This means that the proposed North Lincolnshire capacity could significantly exacerbate anticipated incineration capacity.

49. Given the Applicant's regional capacity forecast set out in Figure 10 of REP3-040, it appears that the North Lincolnshire plant would similarly result in exacerbating regional incineration overcapacity.

50. These levels of overcapacity would be even higher if all of the matters set out in sub-bullet points b-g (above) are considered in line with UKWIN's proposed approach and assumptions.

51. The overcapacity figure would be higher still if it were assumed that some of the consented capacity currently in the pipeline entered construction, e.g. based on the Applicant's assumption that approximately 50% of consented capacity will be realised, as set out on electronic page 134 of REP3-022.

Non-R1 EfW capacity

52. In REP3-022 Appendix A (electronic page 134 of 135) AFRY, on behalf of the Applicant, correctly states that: "UKWIN argues that the Applicant should include non-R1 facilities in the assessment".

53. They go on to state: "We disagree with this view since the waste hierarchy clearly prioritises energy recovery over disposal. We note that much of this capacity is relatively old so operators may not wish to incur significant capex in upgrading to R1 status even if this is possible. Currently non-R1 facilities treat less than 2 mte per annum, and we project this to decline to less than 0.6 mte by the mid-2030s as older facilities retire".

54. UKWIN's position is that non-R1 projects should not be excluded from the assessment. R1 status is not relevant to residual waste treatment capacity calculations as non-R1 plants use waste as a fuel (WaF) thereby reducing the amount of waste available to service new capacity.

55. Furthermore, the Applicant has not demonstrated that meeting the R1 threshold would require significant Capex cost for any operator who does not currently have R1 status, let all of them, in the unlikely event that the Government suddenly made R1 status a requirement for existing facilities.

56. Indeed, there are many operational incinerators that can be expected to already be operating above the relevant R1 threshold but where an application for formal R1 status has simply not been made. For such facilities the only cost that would be incurred to secure formal R1 status would be the relatively modest administrative and similar costs associated with the R1 application process itself.

57. UKWIN has already set out our position with respect to R1 status as part of REP2-108, specifically paragraphs 31-47 on electronic pages 10-12. AFRY appears to have overlooked UKWIN's detailed comments, perhaps opting to limit their reading of UKWIN's REP2-108 submission just to the summary.

58. UKWIN notes, for example, the Applicant's failure to respond to UKWIN's REP2-108 points made at paragraphs 37-39 (electronic page 11) that the UK Government's stated position that "…proposed plant must not result in over-capacity of EfW waste treatment at a national or local level" necessitates a consideration of both R1 and non-R1 EfW capacity.

59. Whilst the Applicant is free to disregard Government policy when carrying out their RDF Supply Assessment, they do so at their own peril.

Waste-to-SAF capacity

60. Quite apart from providing feedstock for co-incineration, some Waste used as Fuel (WaF) may not be available as feedstock for energy recovery because it would be used instead to produce 'Sustainable Aviation Fuel' (SAF) in response to the Government's Jet Zero Strategy and associated SAF mandate. Neither REP3-022 nor REP3-040 adequately explore the feedstock availability and waste hierarchy implications of this issue.

61. On the 23rd of July 2021 the UK Government announced that: "We will introduce a sustainable aviation fuel (SAF) mandate equivalent to at least 10% (around 1.5 billion litres) of jet fuel to be made from sustainable sources by 2030". This is summarised in the 'detail of outcome' section of the associated consultation, and this is provided alongside our submission.

62. On the 22nd of December 2022 the UK Government announced the winning proposals of their Advanced Fuels Fund (AFF) competition. As the Department for Transport website explains: "Each organisation will receive a share of £165 million for the development of sustainable aviation fuel (SAF) production plants in the UK". A copy of this announcement has been provided alongside this submission.

63. One of the successful proposals listed in the announcement was "Velocys plc (Altalto)" which was award £27,000,000. According to the Government announcement: "Based in Immingham, Lincolnshire, the project is developing a commercial scale plant that uses gasification and Fischer-Tropsch technology to convert black bin bag waste into sustainable aviation fuel (SAF). The plant is expected to be operational in 2028 and produce 37.4kt/y of SAF when at full operational capacity".

64. When announcing the project in December 2022, the UK Government's press release (provided alongside this submission) stated: "The UK took another step towards net zero carbon emissions…The successful projects include SAF plants in Teesside, Immingham and Ellesmere Port which will convert everyday household and commercial waste, such as black bin bags, into sustainable jet fuel…The successful projects will also slash CO_2 emissions by an average of 200,000 tonnes each year once fully up and running – the equivalent of taking 100,000 cars off the road".

65. The press release also states that: “Launched alongside the Jet Zero strategy in July 2022, the Advanced Fuel Fund is designed to support our vision to be a world leader in sustainable aviation fuel by accelerating the development of SAF production plants in the UK…”

66. Velocys is quoted in the press release as stating: “Velocys is delighted to receive 2 grant awards from the Advanced Fuels Fund, which will help to accelerate the production of SAF at commercial scale in the UK using our technology. The Altalto grant will allow us to begin FEED for our waste-to-SAF plant in Immingham, which already has planning permission. The e-fuels grant allows us to work with our partners to explore the UK based production of power-to-liquid SAF”.

67. Velocys’ SAF production plant mentioned above is understood to be the same as the development listed in the Applicant’s list of “Consented Energy from Waste plants in England deemed to be under active development” in the Applicant’s RDF Supply Assessment Revision 2 [REP3-040 Table 8] as a “Waste-to-Jet Fuel Facility” in Yorkshire and Humber with a capacity of 500,000 tonnes.

68. The stated outputs for the three AFF-winning Waste-to-SAF projects were as follows:

    - 37.4kt/y of SAF for Velocys plc (Altalto), to be in operation by 2028
    - 83.7kt/y of SAF for Fulcrum BioEnergy Ltd (NorthPoint), to be in operation by 2027
    - 86.6 kt/y of SAF for Alfanar Energy Ltd (Lighthouse Green Fuels), to be in operation by 2028

69. If the Applicant’s figure for the ‘Waste-to-Jet Fuel Facility’ in Yorkshire and Humber of 500ktpa is the correct input for an output of 37.4kt of SAF then this suggests a conversion factor of 13.33 repeating kilotonnes of waste input per kilotonne of SAF output.

70. Based on this factor, if the SAF plants were operating at full capacity then the three Government-sponsored waste-to-SAF projects announced in December 2022 would require more than 2.77 million tonnes of WaF feedstock per annum.

71. Given the information currently available, it would be reasonable to estimate that demand for waste to produce SAF will be around 2.77 million tonnes of WaF per annum by 2028.

72. The 2.77 million tonne figure was derived as follows (based on the notion that 500,000 tonnes of WaF would be required to produce 37.5 kt of SAF):

Facility	Output (kt/y SAF)	Input (t/y)
Velocys (Altalto) 'Waste-to-Jet Fuel Facility'	37.4	500,000
Fulcrum BioEnergy Ltd (NorthPoint)	83.7	1,116,000
Alfanar Energy Ltd (Lighthouse Green Fuels)	86.6	1,154,667
Total feedstock requirement	**208**	**2,770,667**

73. As part of ISH3 UKWIN noted the possibility that more than 2.7 million tpa of WaF would be required to supply the three Sustainable Aviation Fuels (SAF) projects awarded Government funding in December 2022.

74. It is hoped that the Statement of Common Ground (SoCG) process will yield agreement between UKWIN and the Applicant regarding the potential quantity of WaF that would be reasonable to assume would be used for SAF production regionally and nationally in the event the three projects financially supported by the UK Government deliver the announced 37.4 kt/y of SAF output regionally and the 208 kt/y of SAF output nationally.

75. However, whatever the precise level of Waste-to-SAF capacity requirements, generally speaking the anticipated level of Waste-to-SAF capacity could be significant to the balance between feedstock availability and WaF treatment capacity within the context of falling levels of residual waste both regionally and nationally.

76. In this context, the capacity proposed for the NLGEP could be significant with respect to the waste that could be expected to be available for the consented Immingham Waste-to-SAF plant.

77. As such, it is notable that the Applicant has yet to adequately assess whether or not their proposed 760,000 tpa of new capacity is likely to undermine and compete with the delivery of Government-funded Waste-to-SAF capacity nationally and/or in the region.

78. Velocys' Immingham plant is only around a 40 minute journey east of the proposed NLGEP plant, and so could be expected to be directly competing for the same feedstock as the NLGEP proposal.

79. The Immingham plant also has the benefit of full planning permission (as per North East Lincolnshire Council Reference DM/0664/19/FUL for the "Development of a sustainable transport fuels facility, including various stacks up to 80m high, creation of new accesses, installation of pipe lines, rail link, associated infrastructure and ancillary works at Land at Hobson Way, Stallingborough, North East Lincolnshire").

80. Given the extant planning permission and the Government's funding support and the SAF fuel mandate, Velocys' Immingham scheme appears to have a reasonable prospect of being developed.

81. If both the NLGEP and the Immingham SAF production plant developments go ahead, then this could result in cumulative adverse impacts on recycling and waste minimisation and may also require waste to be transported from further afield than would otherwise be the case.

82. Should the NLGEP development result in the Immingham SAF production plant not going ahead, or for the Waste-to-SAF scheme to be delayed or downscaled due to concerns about feedstock availability, this could have additional adverse implications with respect to the delivery of relevant UK Government policies and objectives.

83. Neither the potential cumulative impact on recycling and the waste hierarchy of NLGEP scheme going ahead in addition to the Immingham SAF production scheme, nor the potential for the NLGEP scheme to adversely affect the viability of the Immingham SAF production scheme and the wider implications of this, appear to have been assessed by the NLGEP Applicant in either their REP3-022 or REP3-040.

Future pipeline

84. UKWIN's case shows that incineration overcapacity would exist even without any new consented capacity entering construction.

85. If, in line with electronic page 134 of REP3-022 Appendix A, 50% of consented capacity is realised, this would result in incineration overcapacity being significantly worse than noted above by UKWIN, as UKWIN's assessment above (in the 'Impact of including EfW capacity without CCS potential' subsection of this submission) relates only to capacity that is either currently operational or under construction.

86. In REP3-022 Appendix A (electronic page 132 of 135), AFRY mistakenly asserts that: "UKWIN's case that there will be a significant surplus of treatment capacity if recycling and waste reduction targets are met also assumes that **all consented projects are realised** and none of the current EfW capacity falls away and there is no requirement to fit carbon capture at existing facilities". (**emphasis added**)

87. It is worrying that AFRY appears so unfamiliar with UKWIN's submissions on this topic, for example the clear expression of our position to be found within UKWIN's Written Representation [REP2-110].

88. On electronic pages 19 and 20 of REP2-110 UKWIN sets out a several scenarios, as follows:

    a) Chart comparing potential incineration feedstock in England against existing incineration capacity;

    b) Chart comparing potential incineration feedstock in England against existing incineration capacity with Planning Permission and an Environmental Permit; and

    c) Chart comparing potential incineration feedstock in England against incineration capacity with planning permission.

89. As those charts and the accompanying text make clear, each and every one of those scenarios result in a conclusion that there would be incineration overcapacity, even the scenario that ignores any new capacity entering construction.

90. Furthermore, paragraph 63 on electronic page 20 of UKWIN's Written Representation [REP2-110] explicitly notes that "…as set out in UKWIN's response to the ESA in relation to this publication [REP2-106], these figures are conservative and do not include a significant amount (more than 1 million tonnes) of consented capacity which we did not consider to have been 'live'".

91. As such, UKWIN makes it clear in its WR that UKWIN did not even model a single scenario where "all" consented capacity comes forward, let alone rely on such a scenario for our case.

Policy context

92. On electronic page 45 of REP3-022, the Applicant "…notes that the requirement to demonstrate that the proposed development would not result in overcapacity at a local or national level is only in draft form at present in draft NPS EN3 (September 2021)".

93. On electronic page 50 of REP3-022, the Applicant brazenly states that: "The Applicant would again emphasise that Government policy supports Energy from Waste as part of the solution to divert waste from landfill. It is therefore not for the Examining Authority to test the need for such facilities."

94. In response, UKWIN would like to note that:

    a) The Applicant again overlooks the fact that, whilst Government policy allows for Energy from Waste as part of the mix, EfW is intended to be an ever-decreasing part of this mix and the Government has emphasized the importance of not supporting EfW in circumstances where it competes with recycling or would result in overcapacity.

b) According to Rebecca Pow, speaking on the 12th of February 2020 as Parliamentary Under-Secretary of State for Environment, Food and Rural Affairs: "I wanted to be very clear, and I hope it has come out in what I have said, that 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" (**paradigm shift**). Source: Hansard - Westminster Hall debate on Industrial and Commercial Waste Incineration. UK Parliament, 12 February 2020

c) This is in line with other Government statements. For example, as paragraph 105 of UKWIN's Written Representation set out [REP2-110 electronic page 26] that then Resource Minister Thérèse Coffey, now the Environment Secretary, gave oral evidence in 2018 to the Environmental Audit Committee where she stated: "…I am not convinced that in respecting the waste hierarchy, we want to massively increase the amount of incineration [Energy from Waste] that we are doing...I think, actually, there is sufficient capacity out there for incineration…".

d) Focussing on EN-3 (2021), draft policies can be treated as material planning considerations and given weight when determining NSIP applications, and in relation to this requirement it appears that the Government intends for it to being weight in NSIP decisions;

e) As set out on paragraph 7 of UKWIN's Written Representation [REP2-110 electronic page 11], the need to demonstrate that proposals are compatible with current recycling targets and would not prejudice the movement of waste up the waste hierarchy is set out not just in EN-3 (2021) but also within EN-3 (2011) paragraphs 2.17.3 and 2.17.4;

f) As set out on paragraph 6 of UKWIN's Written Representation [REP2-110 electronic page 10], on the 11th of July 2022 Defra told the UK Parliament that the need for EfW development to not result in local or national overcapacity was current, not just proposed, Government policy, stating: "The Government's view is that Energy from Waste (EfW) should not compete with greater waste prevention, re-use, or recycling. Proposed new plants must not result in an over-capacity of EfW waste treatment provision at a local or national level", indicating that significant weight should be given to the requirement of EN-3 (2021) in this regard in order for the Government's established policy to have effect;

g) As noted in UKWIN's Written Representation [REP2-110 electronic pages 55-56, paragraphs 264-271] the Applicant has not demonstrated conformity with the waste hierarchy nor compliance with relevant plans, strategies and targets, despite the EN-3 requirement set out at EN-3 paragraphs 2.5.66, 2.5.67, and 2.5.70; and

h) As noted by the Examining Authority at ISH3, EN-1 paragraph 3.4.3 is also relevant.

95. Paragraph 3.4.3 of EN-1 (2011) explains how: "...Only waste that cannot be re-used or recycled with less environmental impact and would otherwise go to landfill should be used for energy recovery..."

96. To date, UKWIN remains unconvinced that the incinerator proposed for North Lincolnshire would only treat material that would otherwise be sent to landfill. As UKWIN has noted several times, RDF is not sent to landfill. It appears the proposed facility would rely on burning material that would otherwise be used as feedstock for other incinerators or for co-incineration (e.g. at cement kilns), or converted to Sustainable Aviation Fuel, or indeed sent for recycling or composting.

97. Paragraph 2.5.70 of EN-3 (2011): "The IPC should be satisfied, with reference to the relevant waste strategies and plans, that the proposed waste combustion generating station is in accordance with the waste hierarchy and of an appropriate type and scale so as not to prejudice the achievement of local or national waste management targets in England and local, regional or national waste management targets in Wales. Where there are concerns in terms of a possible conflict, evidence should be provided to the IPC by the applicant as to why this is not the case or why a deviation from the relevant waste strategy or plan is nonetheless appropriate and in accordance with the waste hierarchy".

98. It is crystal clear that, with respect to the new waste incineration capacity proposed for North Lincolnshire, concerns have been raised about a possible conflict with relevant waste strategies and plans, and that concerns have also been raised regarding the proposed capacity's accordance with the waste hierarchy, and how the proposed scale could prejudice the achievement of local or national waste management targets in England.

99. To date, the Applicant's feeble attempts to explain why this is not the case have fallen well short of the sort of evidence UKWIN would find persuasive.

100. On electronic pages 76-77 of REP3-022, the Applicant acknowledges that they have opted not to assess the potential impact of their proposal against Local Development Plans across the whole of the UK, explaining they believe such an assessment would be unreasonable and unnecessary.

101. Even if an assessment of the impact on the entirety of the UK is considered to be unnecessary, it would be consistent with EN-3 to at least assess the potential impact across the Yorkshire & Humber and East Midlands region. Instead, the Applicant can only point to their assessment of the proposal against the "key adopted and emerging North Lincolnshire Council Local Plan".

102. The Applicant's failure to rule out potentially significant adverse impacts on Local Development Plans across the Yorkshire & Humber and East Midlands region should be given significant weight.

Claims regarding the capacity of some projects in the pipeline

103. On electronic page 51-52 of REP3-022 the Applicant notes that WK3 obtained planning consent through the DCO.

In response, UKWIN notes that WK3 already had planning permission, and so the principle of development had already been established.

The DCO allowed for increasing electricity output but only an addition 107ktpa of waste input, which is a significantly lower amount of additional capacity than is proposed for the NLGEP.

Furthermore, that capacity was consented in February 2021 which was prior to EN-3 (September 2021) and prior to the residual waste reduction target being announced in December 2022.

104. UKWIN also notes that the NLGEP Applicant refers on electronic page 42 of REP3-022 to "Kent Enviropower's Allington RDF plant near Maidstone, operating since 2008, has a throughput of 550,000 tpa".

UKWIN notes that in the Applicant's REP3-040 RDF Supply Assessment, Table A6 lists the Allington EfW plant as having a feedstock capacity of only 500ktpa which means there is internal inconstancy from the Applicant as to the throughput of the plant.

105. On electronic page 56 of REP3-022 the Applicant seeks to provide "An alternative example of how consented capacity can be misleading in considering the extent of a capacity gap" referring to "Peel Environmental's Ince Marshes RDF project" as having been "Consented in 2009 at 600,000tpa throughput" and as "under construction and due for completion in 2024, but at 400,000 tpa throughput".

And indeed the Applicant uses the 400 ktpa figure for the capacity of this facility in their REP3-040 RDF Supply Assessment, Table A7.

With respect to this claim, UKWIN notes that while reduced from 600ktpa to 4000ktpa when the technology was changed in 2016, in December 2021 the Applicant applied for the capacity to be increased from 400ktpa to 500ktpa. This permit variation (EPR/LP3132FX/V007) was granted on the 20th of January 2023, and a highlighted extract is provided by UKWIN.

The Ince Marshes Protos plant was originally permitted at 600ktpa to use a fluidised-bed furnace technology which is fairly uncommon. The NLGEP has not provided any evidence that any of the other consented capacity is likely to reduce its capacity as a result of a change in furnace technology.

ADVERSE CLIMATE IMPACTS

Lack of robustness, unanswered questions, and weight to be given to claimed benefits

106. Within the context of the climate impacts of the proposal, UKWIN remains mystified by what appears to be a growing schism between the Applicant's position as set out in their carbon assessment and the position that the Applicant is now taking with respect to the likely GHG impacts.

107. For a proposal that seeks to claim climate change benefits in support of the requested DCO it is particularly surprising that the Applicant has, to date, failed to provide a robust evidence base that could be relied on to support their carbon benefit claims.

108. It appears that whenever UKWIN queries the basis of the Applicant's assumptions, rather than providing more detail on the issue being queried the Applicant appears to jump around and make new statements about completely unrelated areas of their carbon assessment.

109. This unhelpful and disruptive pattern increases, rather than narrows, the uncertainty regarding the climate change impacts of the proposal.

110. The Applicant's new arguments are also increasingly divorced from the evidence base, and increasingly detached from the Government documents, that supposedly provided the foundation for their climate assessment.

111. For example, after having previously advanced several assumptions on the basis that they needed little justification as they were standard industry assumptions, the Applicant now appears to be arguing that those assumptions and methodologies could be replaced by alternatives that favour their development more than their original approach.

112. However, the Applicant fails to acknowledge that those newly introduced assumptions could just as easily, if not more so, be amended to go in the opposite direction, thereby reducing or negating the claimed climate benefit of the proposal.

113. As such, the overall impression provided by REP3-022 electronic pages 56-77 is that the Applicant, knowing that robust sensitivity analysis based on their original central climate case would indicate that their proposal could have the potential for significant adverse carbon impacts, is inadvertently revealing the lack of robustness of their own climate case, which notably originally found that the benefits would be marginal and best and when the Applicant's own sensitivities were taken into account could result in the proposal performing worse than the landfill baseline.

114. As such, the Applicant has made it easier rather than harder for the Examining Authority to conclude, in line with references to the Kemsley decision in REP2-110 electronic page 32 (paragraphs 128-131), that "given the uncertainties in the Applicant's assessment of carbon benefits, the matter should carry little weight in the assessment…The Secretary of State sees no reason to take different view to the ExA in this matter".

115. With this in mind, it is particularly outrageous that, with UKWIN having submitted detailed evidence and having been provided with superficial, irrelevant, or vague responses from the Applicant, the Applicant has the gall to state in their REP3-022, on electronic page 57, that: "the majority of [UKWIN's] points are objecting to the principle of Energy from Waste, rather than the detailed assessment of the proposed development".

116. For an example of where UKWIN made detailed points but were those points were met with meandering distractions we can turn to electronic pages 57-59, where the Applicant avoids responding to UKWIN's detailed statement that: "Relying only on the Applicant's figures, net GHG emissions from the proposed project would have to be only slightly higher, or the net GHG emissions of landfill be slightly lower, for the proposal to have an adverse impact when compared to landfill. For example, increasing the landfill gas recovery rate from 68% to 75% would result in the project having a net disbenefit of between 82,698 and 135,062 tCO2e per annum".

117. Instead, the Applicant bundles up their response to this paragraph with their response to the previous paragraph and offers many digressions whilst failing to engage with the detail of UKWIN's evidence.

118. Further examples of some of the outstanding unanswered questions and some of the inadequacies of the Applicant's response to date are provided in sub-sections below.

119. Some of these shortcoming appear to derive from the Applicant's failure to engage with the actual detail of UKWIN's concerns that relate not to our understanding of Government policy but to the likely climate change impacts of the proposal, the uncertainties raised relating to the assumptions made by the Applicant regarding these potential adverse impacts, and the general lack of robustness and lack of internal consistency in the Applicant's approach.

120. The tone and content of the Applicant's REP3-022 response to UKWIN's climate concerns serve to bolster UKWIN's position that the Applicant's claimed climate benefits should be afforded little weight, and that the prospect of adverse climate impacts should weigh heavily against the proposal.

Internal inconsistency regarding source and alternative fate of the RDF

121. At electronic page 46 of REP3-022 the Applicant states: "The proposed ERF would only be supplied by RDF which would otherwise be destined for landfill…"

122. However, at electronic page 53 of REP3-022 the Applicant states: "…the proposed development will target diverting RDF currently being exported overseas and to landfill..."

123. This discrepancy highlights the issue that the Applicant is trying to have it both ways, saying they would be diverting RDF from export when it suits them to argue that there is a larger pool of material to draw on for feedstock, but elsewhere saying the NLGEP would only be diverting RDF from landfill when that appears to be the more convenient assumption (despite the fact that RDF is not landfilled).

124. This discrepancy persists in the Applicant's submissions despite the fact that UKWIN highlighted this very inconsistency when it appeared on electronic page 25 of the ES Chapter on Climate [APP-054], where we set out in REP2-110 paragraphs 160-165 that:

a) On page 25 of the ES Chapter on Climate [APP-054], the first bullet of the ERF Assumptions column, it is stated that the carbon assessment assumes that: "RDF would otherwise be sent to landfill".

b) This assumption is somewhat odd given that, as noted above, RDF is by definition material "intended for use as a fuel". The Applicant's carbon assessment does not appear to give any reason for assuming that waste would only be diverted from landfill, nor is any reason provided to explain why the Applicant chose not to provide sensitivity analysis of other possible alternative fates for the feedstock.

c) No explanation is given for why, once the material has been converted into RDF, it would be landfilled rather than sent to existing thermal treatment capacity, whether that be a domestic or a foreign incinerator.

d) Indeed, paragraph 6.4.1.4 of the ES Chapter on Waste [APP-063] and paragraph 4.6.5 of the Planning Statement [APP-035] both claim that part of the rationale of the proposal is "to intercept the volume of RDF currently being exported through the Humber ports".

125. It remains the case that, while the Applicant has only assessed their proposal again the impacts of diverting waste from landfill without prior biostabilisation, the NLGEP could also end up diverting waste that would otherwise be exported as RDF, or used at a different incinerator, or used for the production of Sustainable Aviation Fuel, or that might otherwise either be recycled or indeed, if it were sent to landfill, material that might be pre-treated through IVC to biostabilise that waste (to reduce climate impacts).

126. Based on the likely balance between (falling) levels of anticipated residual waste arisings and (increasing) levels of residual waste treatment capacity, it seems unlikely that the proposed NLGEP would be diverting waste from landfill. It is far more likely that there will be more residual waste treatment capacity than there would be genuinely residual waste to burn.

127. However, even in circumstances where there is less incineration capacity than residual waste to burn, in the absence of the NLGEP this material would be far more likely to be treated through increased Waste-to-SAF capacity, increased use of cement kilns and/or RDF export, and/or increased reuse and recycling, rather than through increased landfill.

128. This topic is discussed in more detail in UKWIN's Written Representation, REP2-110 electronic pages 40-42 paragraphs 160-174 and on electronic pages 5-6 of REP3-043.

129. On electronic page 72 of REP3-022 UKWIN is quoted as stating states: "It is not certain that the RDF proposed to be used as feedstock for the North Lincolnshire incinerator would otherwise be sent to landfill. The feedstock might otherwise be incinerated at a more efficient incinerator (and/or at a cement kiln, etc.), and elements of the material used to produce the RDF could otherwise be reduced, reused or recycled."

130. The Applicant's response begins by stating: "In the unlikely event that, where there is a capacity gap as demonstrated in the RDF Supply Assessment [REP1-006], fuel is diverted from another EfW plant to NLGEP, then the other plant would have spare capacity to accept waste that would otherwise be consigned to landfill".

131. The Applicant's response is predicated on a fantasy that there would be an unlimited supply of waste as fuel that other plants would be able to accept in the event that the capacity proposed for North Lincolnshire diverts RDF from their incinerator.

132. As set out above and in previous UKWIN submissions, the reality is that there is expected to be a finite and ever-decreasing quantity of Waste as Fuel, alongside increasing demands for WaF both from conventional EfW plants but also from cement kilns, waste-to-SAF plants, etc.

133. This means that the whole premise of the Applicant's response is flawed, and the their failure to seriously address the climate change, waste hierarchy and 'need' implications of WaF treatment overcapacity should weigh heavily against the scheme.

Claims to have undertaken a 'worst case' assessment

134. The Applicant repeatedly claims that their climate assessment somehow constitutes a 'worst case' assessment, for example in REP3-022 electronic pages 59, 65, 62, and 71.

135. Curiously, the Applicant regularly appears to make such statements when they are avoiding engagement with detailed examples supplied by UKWIN regarding how the Applicant's modelling parameters and methodology are *not* a worst case assessment.

136. They seem to be saying that they can be generous in some areas because they are being less generous in other areas.

137. However, this appears to be little more than post-hoc justifications, because in many cases the Applicant set out their assumptions without any indication that they were intended to have a 'pro-incineration' bias on the basis that other elements exhibited an 'anti-incineration' bias.

138. Indeed, in many cases the Applicant originally justified their assumptions on the basis that they were considered reasonable or likely, and so for them to change their position now – rather than either justifying the assumptions in their own right or providing sensitivity analysis in line with UKWIN's evidence that those assumptions were skewed in favour of the incinerator – undermines the credibility not just of those assumptions but of all of the Applicant's 'pick and mix' assumptions and methodologies more generally.

139. The Applicant's response to UKWIN's detailed criticisms of the Applicant's carbon assessment appears to boil down to arguing that UKWIN should not have taken the Applicant's original carbon assessment seriously.

140. Having taken that position, we believe that the Examining Authority would be justified in simply concluding that the Applicant's whole carbon case, including their latest revisions, should not be taken seriously.

141. Focusing on one such example of the Applicant making the 'worst case' defence, we focus below on the Applicant's response to UKWIN's detailed claim found on electronic page 59 of REP3-022 that:

"The Applicant separately looks at the sensitivity for 'Landfill gas recovery rate and electricity generation displacement factor' and for 'RDF Composition (Biogenic content and biodegradability of waste)'. These sensitivities could combine to create an even higher adverse impact than predicted in either sensitivity scenario.

As such, even if the Applicant's sensitivity analysis were considered adequate, it indicates that the proposed development could perform worse than landfill and, in some cases, significantly worse than landfill."

142. Rather than acknowledging that plain truth, the Applicant responds in REP3-022 on electronic pages 59-60 that:

"The Applicant has undertaken a very conservative approach to the assessment of GHG emissions, consistent with Defra's guidance on assessing the carbon balance of energy from waste plant (Energy recovery for residual waste. A carbon based modelling approach, Defra, February 2014). Therefore, with respect, it is not helpful to consider progressively narrowing sensitivity analyses. Any combination of unlikely parameter values considered in sensitivity analysis multiplies their respective probabilities, resulting in a vanishingly small likelihood of their occurrence.

The Applicant has sought to undertake a reasonable worst-case approach in relation to climate change in chapter 6 of the ES [APP-054], however this has resulted in an under-estimate of the climate change benefits for a number of reasons which are summarised below. For this reason, we have not sought to consider the various alternative scenarios suggested by UKWIN in detail".

143. Yet, the Applicant does ***not*** always follow guidance set out within the carbon based modelling approach.

144. By way of illustration, with respect to the 'electricity generation displacement factor' referred to within UKWIN's comment, as can be seen in REP2-109 electronic page 59, the Applicant's central approach to displaced electricity of using CCGT rather than the marginal energy mix is at odds with the approach advocating for within that Defra document. As such, the Applicant cannot hide behind follow Defra's approach when they in fact depart from that approach.

145. UKWIN is not actually talking about combining multiple unlikely sensitivities, but rather inviting the Applicant to correct multiple shortcomings identified in their central analysis.

146. Instead of either showing that their original assumption set of assumptions were sufficient or responding constructively to UKWIN's straightforward observations about how the Applicant's own sensitivity analysis demonstrates that the proposed development could perform significantly worse than landfill, the Applicant goes off on several error-strewn tangents that come across not as a response to UKWIN but rather as the Applicant arguing with themselves and second guessing the robustness of the evidence that they had previously submitted to this Examination.

147. Indeed, rather than moving closer to following the guidance that the Applicant claims to be following (i.e. Defra's Carbon Based Modelling Approach), at electronic pages 60-64 of REP3-022 the Applicant, who was unwilling to speculate on more closely aligning with Defra's guidance, is curiously willing to speculate wildly on the impacts of significantly departing from that approach in terms of global warming potential and timescales when this suits their purposes.

148. The Applicant states that they "have not sought to consider the various alternative scenarios suggested by UKWIN in detail". The Applicant similarly stated in REP3-022 electronic page 67 that: "…it is not considered helpful to consider further alternative scenario".

149. It would be reasonable to conclude that the Applicant is wary of what the results of a detailed consideration of UKWIN's points might yield.

Claims that the Applicant's carbon assessment showed that the Project 'will' result in GHG benefits compared to landfill

150. Electronic page 57 of REP3-022 records UKWIN's statement that: "Relying only on the Applicant's figures, net GHG emissions from the proposed project would have to be only slightly higher, or the net GHG emissions of landfill be slightly lower, for the proposal to have an adverse impact when compared to landfill. For example, increasing the landfill gas recovery rate from 68% to 75% would result in the project having a net disbenefit of between 82,698 and 135,062 tCO_2e per annum".

151. Rather than acknowledging this fact, the Applicant replies on electronic page 56-57 of REP3-022 that: "…the assessment, carried out on a reasonable worst case basis, has concluded that there **will be** a net reduction in GHG from the Project compared to the alternative baseline landfill scenario and therefore there will be no significant residual effects from the Project and there should be a positive impact" (**emphasis added**).

152. Similarly, internal page 68 of REP3-022 records UKWIN as stating: “According to the Applicant, the facility would have a similar carbon performance to landfill” and includes the response that: “The Applicant has undertaken a very robust approach to the assessment of GHG emissions which demonstrates that there **will be** a net reduction in GHG emissions from the Project compared to the alternative baseline landfill scenario” (**emphasis added**).

153. Page 72 of REP3-022 claims that: “The Applicant has undertaken a very robust approach to the assessment of GHG emissions which demonstrates that there **will be** a net reduction in GHG emissions from the Project compared to the alternative baseline landfill scenario” (**emphasis added**).

154. The Applicant makes similar claims on electronic pages 68, 71, and 74 of REP3-022.

155. However, despite the Applicant’s failure to acknowledge this, the Applicant’s own carbon assessment found that their scheme would have similar impacts to landfill, just as UKWIN has pointed out.

156. The Applicant’s carbon assessment APP-054 stated on paragraph 8.1.1.2 on electronic page 42 that: “There is a net carbon benefit of 6,066 tCO2e per annum for the Project compared to the alternative baseline landfill scenario”.

157. This is elaborated upon in Table 11 on electronic page 43 of APP-054, when the Applicant states that the project would result in emissions of 76,008 tCO_2e per annum compared to the landfill baseline of 82,074 tCO_2e per annum (with 82,074 minus 76,008 equalling 6,066).

158. With a central claimed improvement over landfill of less than 7.4% it is hard to escape that the Applicant’s primary claim on benefits was that it would only be marginally better than landfill, which therefore means that the impacts would be similar to landfill.

159. As noted by UKWIN on electronic page 29 of our Written Representation, [REP2-110] the Applicant’s own sensitivity analysis found that the plant could perform up to 135,062 tCO_2e per annum ***worse*** than landfill, and that is before one combines the impacts of sensitivity scenarios occurring simultaneously.

160. The Applicant therefore appears to be trying to rewrite history by pretending that they never made the claims that they clearly made within their APP-054 carbon assessment.

Conflating the terms ‘renewable’ and ‘low carbon’

161. As noted on electronic page 68 of REP3-022, UKWIN’s Written Representation set out how: “According to the Applicant, the facility would have a similar carbon performance to landfill. It is hard to see how that could be described as ‘low carbon’. The plant could be considered to generate electricity with a fossil carbon intensity of 548gCO2e/kWh, which is higher than unabated CCGT and significantly higher than the BEIS marginal electricity mix”.

162. The Applicant’s response on electronic pages 68-69 of REP3-022 seem to completely misunderstand Government policy and indeed misstates the Applicant’s own carbon assessment.

163. The Applicant begins by making an argument about how there “will be a net reduction in GHG emissions from the Project compared to the alternative baseline scenario” which UKWIN already has already shown to be incorrect.

164. The Applicant then goes on to indicate that the Government’s position is that EfW has a better GHG impact than landfill, which goes against the Government’s EfW Guide and indeed the Carbon Based Modelling Approach which both highlight how there are tipping points that result in EfW performing worse than sending the same feedstock directly to landfill.

165. The Applicant then states: “It would be misleading to consider only the direct emissions of the facility, without reference to its benefits in avoiding emissions from landfill, the reduction of which explains the priority of the waste hierarchy”.

166. Firstly, as noted above, if the Applicant’s original carbon assessment’s central claim is correct then the proposal might have very little or even negative benefits over landfill.

167. Secondly, the idea of comparing incineration emissions to the conventional use of fossil fuels does not come from UKWIN, it comes from the NPPF Glossary itself, which states that: “Low carbon technologies are those that can help reduce emissions (compared to conventional use of fossil fuels)”.

168. Thirdly, the approach to considering fossil carbon intensity using electricity export against carbon emission without any discount for landfill avoidance is an established approach that has long been used by the UK Government.

169. For example: In answer to a Parliamentary Question from Stephen Gilbert MP, in January 2011 Greg Barker (then Minister of State for Climate Change) replied saying: "Within the UK, incinerators which generate electricity from municipal solid waste (MSW) are commonly referred to as energy from waste (EfW) plant. In 2008, the latest year for which data are available, we estimate that EfW plant produce 0.54 kt carbon dioxide equivalent per GWh (equivalent to 0.54 kg per kWh). This figure incorporates emissions of carbon dioxide, methane and nitrous oxide. It should be noted that there is a high level of uncertainty around this figure".

170. A similar definition of carbon intensity was set out in the 2020 Energy White Paper (which was referred to by the Applicant on electronic page 40 of their Planning Statement APP-035) which defines carbon intensity as "The amount of CO_2 emitted when generating a unit of electricity, measured in gram of CO_2 per kWh of electricity produced". This shows that the Government's definition of carbon intensity is based on direct CO_2 emitted, and not net CO_2 impact.

171. Further evidence of the precedent of incineration being referred to as not being low carbon is found within UKWIN's Good Practice Guidance on electronic pages 82-86 of REP2-109.

172. The Applicant's response concludes by stating: "Energy from Waste is specifically covered by NPS EN3 'Renewable Energy' and therefore the Government clearly considers that it is renewable as a matter of policy".

173. The Applicant appears to conflate 'renewable' with 'low carbon', and then the Applicant goes on to misunderstand the renewable status of energy generated through incineration.

174. As the Applicant acknowledges in REP1-015 electronic page 4, the ERF is only a ***partially*** renewable energy source. This is because the UK Government does not consider incineration to be a wholly renewable energy source due to the fossil fuel element of the feedstock.

Connecting to the East Coast Cluster

175. In REP3-022 electronic page 65, the Applicant concedes that "extent of carbon capture cannot be known with certainty at this point in time".

176. While the Applicant wants increased weight to be given them for this pipework, our understanding is that in reality the situation is that while historically the proposed East Coast Cluster included a branch linking to the application site, the current iteration of the scheme (i.e. the version that attracted Government funding) no longer reaches the proposed development site.

177. This should be seen as reducing rather than increasing the confidence that can be placed on the prospect of a much higher degree of carbon capture at the development than was considered in the original climate change assessment.

178. The Applicant notably does not rebut the points made by UKWIN in REP2-108 electronic pages 13 and 14, paragraphs 55-61, where we set out how simply being "near to" pipework does not overcome the serious challenges faced by all similar CO_2-emitting facilities that are not included in such a network.

179. That is to say, the Applicant does not dispute UKWN's case that in order to connect to the CO_2 network without a pipework connection one would have to expend a great deal of energy and other resources in converting the CO_2 gas into a liquid form for transport and then back into a gaseous form for long-term storage, and that this comes with significant unmodelled environmental and financial costs.

Metals recycling

180. On electronic page 73 of REP3-022 UKWIN is recorded as stating: "Assuming, as the Applicant does, that 1.1% of the feedstock would be metal is unreasonable given that the feedstock is expected to be mostly RDF where a large proportion of the metals would have been removed. It is likely that the metal that is recovered would be largely or entirely ferrous metal rather than being an even split."

181. The Applicant states that: "The Applicant considers that the parameters values used are prudent and reflect waste composition and likely processing technology. Note that it is easier to remove ferrous metal in RDF processing than non-ferrous metal, through magnetic separation."

182. Unfortunately, the Applicant fails to provide any meaningful response to UKWINs evidence that explains why the parameters are ***not*** prudent, which included both real world data from the nearby Ferrybridge Multifuel facilities and data on the pricing of metals for both ferrous and non-ferrous metals, which is set out in REP1-023 electronic pages 6-9 (paragraphs 19-34), REP2-110 electronic pages 42-44 paragraphs 175-193, and the associated supporting evidence which is REP1-027 and REP2-107.

183. This evidenced from UKWIN also showed the impact of applying metal recovery assumptions that are more in line with real world evidence, which indicates that, even if all the other assumptions in the Applicant's central analysis were correct, this change in assumption on its own would result in the proposal having a negative GHG impact.

184. The Applicant has not disputed UKWIN's conclusions in this regard, and so it would be reasonable to conclude that they do not dispute UKWIN's numerical calculations regarding the impact of using UKWIN's suggested assumptions for metal recovery.

185. If the Applicant wants their assumptions to be given any weight in the decision, then they should be willing to defend these assumptions when challenged rather than simply restating their position and ignoring the evidence that is before the Examination that contradicts their position.

186. The Applicant's response also states: "There is no specification that states the extent of removal of any material in producing RDF".

187. It appears from these responses that the Applicant has little faith that it will use RDF suppliers who care about recycling when it comes to what UKWIN's undisputed evidence has shown to be high-value recyclate that is typically recycled prior to being supplied to incinerator operators at other plants such as Ferrybridge, and this undermines their wider arguments about the non-recyclability of their intended feedstock beyond metals.