

## ***Comments on submissions received at D3***

---

# **UKWIN'S D4 COMMENTS ON REP3-040**

**REP3-040: DEADLINE 3 SUBMISSION -11.3 COMMENTS ON  
WRITTEN REPRESENTATIONS: PART 2 – OTHER INTERESTED PARTIES**

---

### **Proposed Development:**

**Medworth EfW CHP**

### **Proposed Location:**

**Land on the Algores Way Industrial Estate to the west  
of Algores Way in Wisbech, Fenland, Cambridge**

### **Applicant:**

**Medworth CHP Limited**

### **Planning Inspectorate Ref:**

**EN010110**

### **Registration Identification Ref:**

**20032985**

---

**MAY 2023**

---



**United Kingdom  
Without Incineration  
Network**

## CONTENTS

---

<b>Introduction .....</b>	<b>2</b>
<b>Climate Change .....</b>	<b>2</b>
Climate change spreadsheets.....	2
<i>Request for climate change modelling data spreadsheet .....</i>	<i>2</i>
<i>Request for further elaboration of the Firing Capacity Diagram.....</i>	<i>5</i>
Conformity with guidance .....	8
<i>Conformity.....</i>	<i>8</i>
<i>IEMA GHG Mitigation Hierarchy. ....</i>	<i>11</i>
<i>Decarbonisation of the electricity grid .....</i>	<i>12</i>
<i>Complete, consistent, transparent and accurate assessment .....</i>	<i>13</i>
<i>GHG quantification principles – biogenic carbon sequestration .....</i>	<i>13</i>
<i>Significance – carbon intensity and impact on decarbonisatio .....</i>	<i>15</i>
<i>Weight to be given to the Applicant's claimed climate change benefits....</i>	<i>15</i>
<b>Planning Policy and Need .....</b>	<b>18</b>
Planning Policy / Need for the Development.....	18
Government policy on need to avoid incineration overcapacity .....	20
<i>ONS Population Forecasts and focus on 2042/2043.....</i>	<i>20</i>
<i>Geographical focus of England/UK.....</i>	<i>21</i>
<i>Proportion of residual waste available for incineration.....</i>	<i>21</i>
<i>Current and predicted incineration capacity.....</i>	<i>22</i>
<i>Cement kilns.....</i>	<i>24</i>
<i>Waste-to-SAF capacity.....</i>	<i>24</i>
Proposed capacity could undermine recycling and the circular economy ...	26
DEFRA's concerns about the recyclability of residual waste .....	28
SoS concerns regarding incineration diverting from recycling .....	28

## INTRODUCTION

---

1. REP3-040 is the Applicant's Deadline 3 (D3) submission where they comment on the Written Representations made by Interested Parties including the Deadline 2 (D2) submission made by the United Kingdom Without Incineration Network (UKWIN).
2. Section 4 of REP3-040 includes the Applicant's summary of the points raised by UKWIN's Written Representation (REP2-066) and provides the Applicant's response.
3. Many of the points made by the Applicant in their REP3-040 response to UKWIN have already been addressed by UKWIN in our D3 submission (REP3-050). Indeed, in their REP3-040 submission the Applicant often does little more than repeat previously made statements without genuinely engaging with the points raised by UKWIN.

## CLIMATE CHANGE

---

### Climate change spreadsheets

#### ***Request for climate change modelling data spreadsheet (paragraphs 3 to 12)***

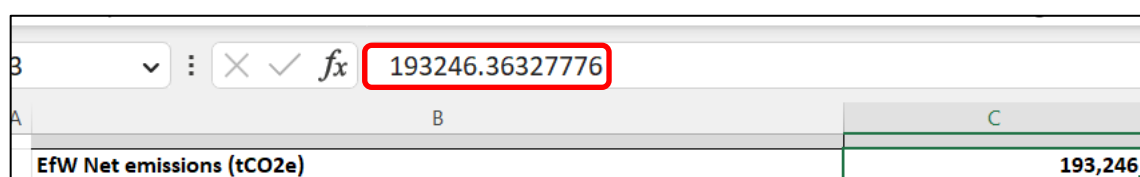
4. Whilst the Applicant agreed at ISH4 to provide a functional copy of their climate spreadsheet, in the interest of informing this Examination, UKWIN sets out below the issues that gave rise to our request.
5. On internal page 93 of REP3-040 the Applicant summarises paragraphs 3-12 of UKWIN's REP2-066 as "Request for climate change modelling data spreadsheet".
6. This is an oversimplification of UKWIN's representation.
7. UKWIN did not simply request any old climate spreadsheet but, as noted on paragraph 4 of UKWIN's REP2-066 submission, UKWIN explicitly requested the Applicant provide "spreadsheets with formulas that would enable a user to carry out sensitivity analysis or to confirm that that the various calculations made are either mathematically correct or methodologically sound".
8. In their response to paragraphs 3-6 of UKWIN's REP2-066, the Applicant claims that:

**The Applicant has submitted its GHG emissions assessment spreadsheets (in PDF format as required) to the examination as Appendix 10.6A to this document – Summary of Submissions made by Interested Parties at Deadline 1 and the Applicant's Response Appendix 10.6A Climate Data (Volume 10.6) [REP2-023].**

9. By oversimplifying their summary of UKWIN's request and then responding to that oversimplified summary rather than to UKWIN's actual request, the Applicant's response fails to engage with the reasons why the Applicant's climate submissions to date remain inadequate.
10. At paragraphs 3-9 of REP2-066 UKWIN explained how what the Applicant sent to UKWIN late in the day on Friday 24<sup>th</sup> March (the day of Deadline 2) was not the spreadsheets requested by UKWIN, as the file shared by the Applicant was completely non-functional.
11. That is to say, the spreadsheets provided by the Applicant were devoid of the formulas that are needed to link changes in input to changes in output.
12. This failure both frustrates the ability to confirm the Applicant's approach and the ability of third parties such as UKWIN to investigate how changes in assumptions can impact the conclusions.
13. At Paragraphs 3-4 of REP2-066 UKWIN noted:

What was provided [by the Applicant on Friday 24<sup>th</sup> March] appears to constitute 'output' data and a disconnected list of sources and assumptions rather than spreadsheets with formulas that would enable a user to carry out sensitivity analysis or to confirm that that the various calculations made are either mathematically correct or methodologically sound.

No formulas were provided to show how the Applicant goes from their inputs to their outputs. Whilst in some cases the relationship between inputs and outputs is obvious, in others it appears that there simply are no connections between the two or that there must be unstated assumptions or inputs.
14. The Applicant continues to fail to respond to this criticism, and instead incorrectly claims that the requested spreadsheets were provided – without rebutting UKWIN's evidence to the contrary.
15. The Applicant's continued reluctance to be transparent about how they arrived at their conclusions or to provide spreadsheets that would facilitate sensitivity analysis should significantly reduce the weight given to their climate claims.
16. To further illustrate this issue, we show below a screenshot from the spreadsheet opened in Excel for the Core Case value for 'EfW Net emissions (tCO<sub>2</sub>e)':



The screenshot shows an Excel spreadsheet with the following data:

	B	C
A		
	EfW Net emissions (tCO <sub>2</sub> e)	193,246

The formula bar at the top shows the value 193246.36327776, which is highlighted with a red box.

17. This shows that the value for that cell is stored in the spreadsheet with which we were provided as a fixed value, and not a formula providing a calculation.
18. Is the Applicant really expecting UKWIN and others to believe that the value for EfW Net Emissions was calculated by hand and the results entered manually into the spreadsheet?
19. Presumably, the reality is that the Applicant used a spreadsheet to originally calculate net emissions, meaning that what the Applicant provided to UKWIN was not the spreadsheets used by the Applicant to generate the outputs but was instead nothing more than a representation of the values used in the process rather and not a spreadsheet that shows the actual process itself.
20. This is analogous to asking for a recipe and instead being provided with nothing more than a list of ingredients.
21. This stands in stark contrast to the Hertfordshire Rye House public inquiry, for example, where the Applicant's climate consultants provided the actual spreadsheet relied upon to make their calculations.
22. Below is a screenshot of the Excel spreadsheet provided by ERM as part of that inquiry:

The screenshot shows an Excel spreadsheet with the following data:

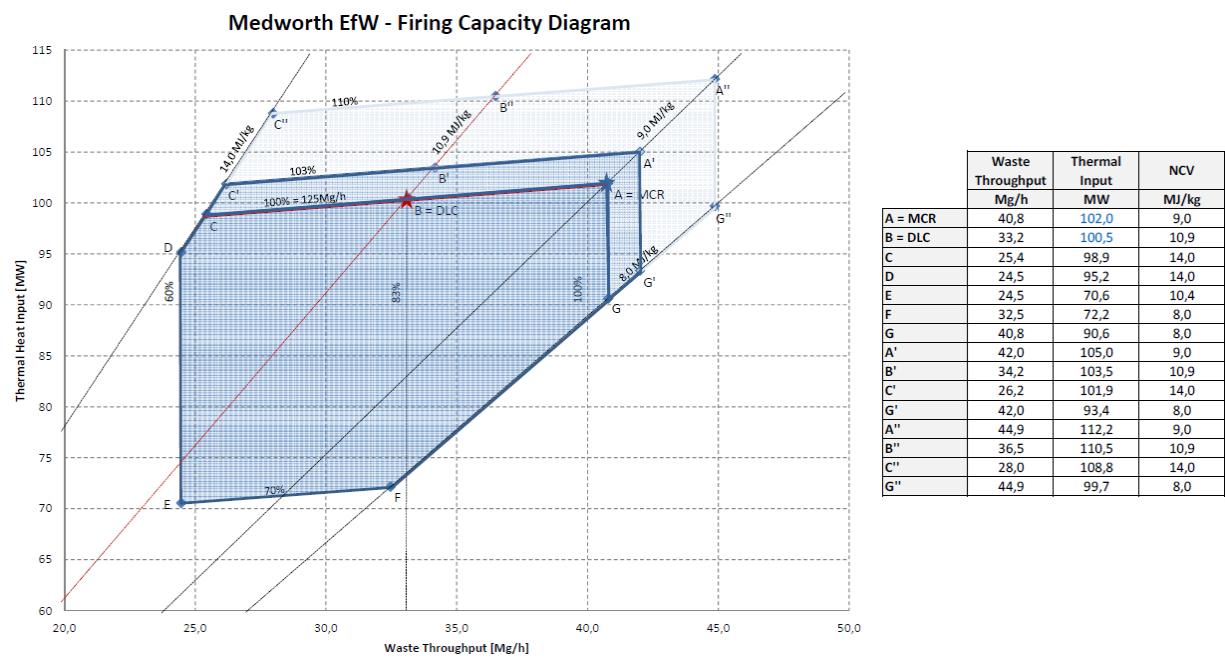
Waste Fraction	Sub-fraction	EN	EO	EP	EQ	ER	ES
		cycling emissions (t)	Ferrous metal recovery (t)	Fe metal recycling avoided emissions (tCO2e)	Non-ferrous metal recovery (t)	Non-Fe metal recycling avoided emissions (tCO2e)	Total net carbon emissions (tCO2e)
57	Fines	2	0	0	0	0	
58	Total	187	4,628	8,464	2,852	24,812	-25,653

The formula bar shows the formula: `=Scenario3d[[#Totals],[Fossil Carbon emissions from stack (tCO2e)]]-Scenario3d[[#Totals],[Offset`

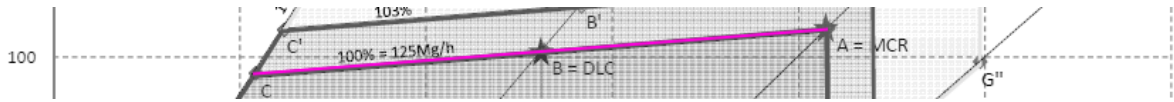
23. As can be seen from the screenshot, in that case the full formula is shown because a working spreadsheet was provided rather than a non-functional spreadsheet.
24. As UKWIN mentioned at ISH4, if providing such a level of transparency was appropriate for an EfW facility that would have had a maximum throughput capacity of 350,000 tpa, then surely it is appropriate for a facility that is considerably larger.
25. UKWIN provides further details regarding the inadequacy of the Applicant's so-called spreadsheet at paragraphs 10-29 of REP3-050.

**Request for further elaboration of the implications of the Medworth Firing Capacity Diagram with regard to the link between NCV/thermal input and MW/MWh output (paragraphs 6 and 7).**

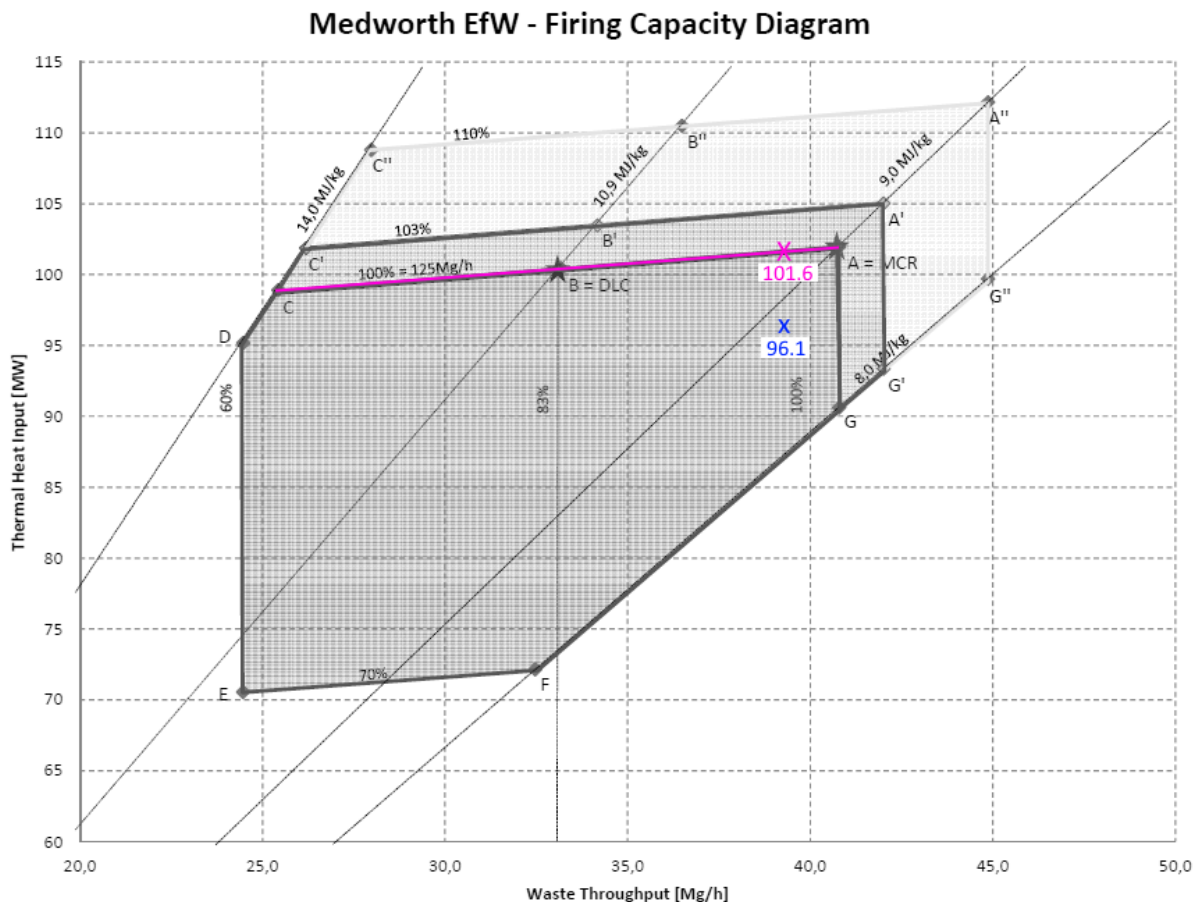
26. Despite UKWIN’s request, the Applicant’s response on internal pages 92-93 of REP3-040 does not actually set out the implications of the Firing Diagram with respect to the NCV inputs of 9.53, 9.50 and 8.85 at the fixed rate of input of 39.1Mg/h.
27. UKWIN did not ask for an explanation of how to read a capacity firing diagram. UKWIN requested the Applicant’s interpretation of their diagram and the Applicant’s explanation of the discrepancy between what the diagram indicates and what their climate change assessment modelled.
28. The Applicant provided the following diagram in Graphic 14.2 of APP-041 (Climate Assessment):



29. In REP3-040, the Applicant stated: “In Graphic 14.2 of ES Chapter 14: Climate Change (Volume 6.2) [APP-041], the line between point C and point A represents 100% steam production of 125 Mg/h. The facility is designed to operate at full load or 125 Mg/h steam production per stream (250 Mg/h combined) with any waste NCV between these two points and, since steam production is constant throughout this range, gross power production will remain close to 60 MWe throughout”. (emphasis added)
30. We take this to mean that when the waste throughput and thermal input falls below this line the plant would produce less than 100% steam and therefore not remain close to 60 MWe gross electrical generation. We have highlighted this narrow range of full output in fuchsia:



31. As per APP-088 Climate Appendices Table 14C.1 the Applicant's Reduce Food & Plastic scenario is premised on treating 625,600 tonnes of waste feedstock with a net calorific value of 8.85MJ/kg.
32. In REP3-040 the Applicant explains that the figures for Waste Throughput and Thermal Input are 'per line' so in reality are twice the stated value.
33. Knowing this, it is possible to calculate the thermal input and waste throughput associated with the Applicant's Reduced Food & Plastic case:
  - a. The waste throughput is 39.1 Mg/h, which is the 625,600 tonnes divided by 8,000 hours of operation and then halved to make it a per-line figure.
  - b. The thermal input is 96.1 MW which is the 8.85 MJ/kg multiplied by the waste throughput and then divided by 3,600 to convert MJ into MW (with the results multiplied by 1,000 for unit conversion).
34. This allows for a comparison between the thermal input required for a 100% steam value at 39.1 Mg/h waste throughput and the amount of thermal input that would be produced by the reduced food and plastic case (also at 39.1 Mg/h), as shown in the following graph:



35. Assuming a linear relationship between thermal heat input and steam output at a given waste throughput, the fall from around 101.6MW to 96.1MW of thermal heat input can be expected to result in a fall in electricity generation from around 100% (60MW) to around 94.59% (56.75 MW).
36. This could mean that the plant might operate at significantly less than full output if the calorific value of the waste declines.
37. This therefore calls into question the Applicant's assumption about how much waste they could generate from 625,600 tonnes of waste at an NCV of 8.85 when operating for 8,000 hours.
38. Alternatively, to produce around the full output using a waste feedstock composition matching the reduced food & plastic case, the plant would actually need to treat around 660,000 tonnes per annum of waste rather than around 625,000 tpa.
39. As previously discussed, even if the plant could theoretically generate 60MW of electricity that does not mean that it would do so all the time, as turbine or generator non-availability would mean that the plant might be operating with no electricity being generated whatsoever, whilst still requiring the parasitic load to operate.
40. This would mean the facility might at some points actually have negative net electricity generation (i.e. the operator might be forced to import all of the electricity required to operate the incinerator).
41. The need to consider this matter is set out in detail in the Good Practice Guidance, which assessed operational incinerators in 2020 and found that electricity generated by incinerators was on average 15% lower than implied by the claimed headline megawatt (MW) generation figure, i.e. an incinerator advertised as being capable of generating 10MW of electricity typically only generated 8.5MW.
42. To assess the potential impacts of the sort of suboptimal electricity generation set out above, we believe it would be reasonable to assess electricity generation being on average 15% lower than the claimed headline MW generation figure, i.e. 51MW and not 60MW.
43. If this 51MW gross figure is then reduced to account for the parasitic load this would result in a net electrical output of only around 46MW.



## Conformity with guidance

### **Conformity with Environmental Impact Assessment Guide to Assessing Greenhouse Gas Emissions and Evaluating their Significance – 2nd Edition, the General Principles of PAS 2080, and UKWIN’s Good Practice Guidance (paragraphs 13 to 26).**

44. In their response to paragraphs 13-26 of UKWIN’s REP2-066, the Applicant starts by once again reiterating the very same statement about which elicited the observation made by UKWIN at paragraph 20 of REP2-066 that: “the Applicant’s approach does not conform with various elements of the IEMA guidance and to the general principles of the PAS 2080 guidance”.
45. Regarding the Applicant’s conformity or otherwise with the IEMA and PAS 2080 guidance, UKWIN explores the Applicant’s response in more detail below in relation to subsequent paragraphs of REP2-066.
46. The Applicant then goes on to respond to UKWIN’s point about conformity or otherwise with UKWIN’s Good Practice guidance, and we respond to each of their points in turn.
47. In relation to Recommendation 1 (*Transparency and openness to scrutiny*) the Applicant claims to be transparent, despite continuing to withhold the spreadsheets requested by UKWIN.
48. In relation to Recommendations 2-4 (*Impact of waste composition and technology on energy and GHG outputs*) the Applicant refers to how their Environmental Statement (ES) “includes a sensitivity analysis of waste composition and GHG emissions”.
49. While UKWIN welcomes the Applicant’s acknowledgement that “that variation in residual waste composition affects the estimation of GHG emissions”, the Applicant’s sensitivity analysis is limited and does not show the relevant tipping points where foreseeable changes in feedstock composition could change the outcome of their GHG emissions calculations.
50. For example, one limitation of the Applicant’s sensitivity analysis arises from their decision to bundle together a 90% reduction in food waste with a 90% reduction in plastic waste (and a 20% reduction in other recyclable materials) as part of their ‘Reduced food and plastic’ sensitivity.
51. This bundling does not enable Interested Parties or the ExA to understand, for example, the impact of food waste being reduced (e.g. due to the more widespread introduction of separate food waste collections as part of the Government’s efforts to harmonise collection regimes across all waste collecting authorities).

52. If reductions in food waste were to be bundled with reductions in other materials, then it would make more sense for the reductions in food waste to be bundled together with reductions in waste wood, paper and card to show the climate impact of removing a significant proportion of biogenic material from the residual waste stream.
53. Despite UKWIN's Good Practice Guidance explicitly stating that: "Waste composition assumptions should be justified and sensitivity analysis should be used to show the impacts of future changes such as increased food and biowaste collection" (electronic page 92 of REP1-096) the Medworth Applicant fails to address this point in their REP3-040 response to this recommendation.
54. The reason for UKWIN's explicit reference within Recommendation 3 to assessing the GHG impacts of increased food and biowaste collection is made clear by the examples of such analysis provided in Good Practice Guidance.
55. For example, as noted in UKWIN's Good Practice Guidance (electronic page 94 of REP1-096), Zero Waste Scotland's July 2021 Technical Report entitled 'The climate change impacts of burning municipal waste in Scotland' modelled the impact of changes in food and paper content of the residual waste stream. In relation to the latter Zero Waste Scotland found that: "When biogenic carbon decreases (e.g. if the proportion of food and paper waste in municipal residual waste falls), landfill greenhouse gas emissions fall".
56. Such a finding with respect to the impact of decreases in food and other biogenic waste on the relative net GHG impacts of landfill and incineration is masked by the Applicant's bundling together of food waste reductions and reductions in plastic.
57. In relation to Recommendation 5 (*The role of landfill as a biogenic carbon sink*) the Applicant's REP3-040 response ignores the thrust of Recommendation 5, which is (as per electronic page 105 of REP1-096) that:
- When comparing incineration with landfill, assuming that the release of biogenic CO<sub>2</sub> from an incinerator is 'carbon neutral' does not justify ignoring the biogenic carbon sequestered in landfill. Instead, it follows that avoiding the release of biogenic CO<sub>2</sub> would be a 'carbon benefit' (net negative CO<sub>2</sub> emission) of landfill that must be taken into account. The incineration of one tonne of carbon releases 3.667 tonnes of CO<sub>2</sub>, meaning that every tonne of biogenic carbon in the landfill sink avoids the release of 3.667 tonnes of CO<sub>2</sub> when compared to incineration.

58. The Applicant's failure is difficult to explain, especially when the issue is set out in some detail at paragraph 82 of REP2-066. This topic is explored further below as part of UKWIN's comments on the Applicant's response to 'GHG quantification principles – biogenic carbon sequestration (paragraphs 79 to 88)'.
59. In relation to Recommendations 6 and 7 (*Discrepancies between theoretical and real world performance*) the Applicant once again reiterates the references to where one can find their list of assumptions instead of either acknowledging or attempting to justify or rectify their failure to provide sensitivity analysis with respect to the level of electricity exported to reflect real world data about turbine non-availability, generator failure, and the potential for EfW plants to operate at suboptimal combinations of throughput and calorific value.
60. In relation to Recommendation 8 (*Displacement of other sources of electricity and/or heat*) the Applicant seeks to rely on 'additional sensitivity analysis' found in REP1-036 without acknowledging that their additional sensitivity analysis does not redeem them from having applied an indefensible base case assumption for displaced electricity (i.e. by applying the 'current grid average' (2020/21 grid average) when the facility would not be operational for years to come and would then continue to operate for decades while the rest of the electricity grid progressively decarbonises).
61. In relation to Recommendation 9 (*Waste treatment comparators / counterfactuals*) the Applicant again relies on an unreasonable assumption; in this instance the Applicant relies on the assumption that if the Medworth plant were not to be built then the material that it would have treated would inevitably otherwise be sent untreated to landfill for the duration of the Medworth facility's operational lifetime).
62. In relation to Recommendation 10 (*Low carbon claims*), the Applicant fails to acknowledge the high carbon intensity of the electricity that the Medworth EfW facility would export, and again makes questionable assumptions about the alternative fate of their proposed incinerator feedstock.
63. In light of the above analysis, and the additional analysis provided by UKWIN in REP2-066, it is clear that there are many areas where the Applicant's approach fails to follow the good practice identified by UKWIN in its Good Practice Guidance.
64. If the Applicant had followed that Guidance, then their analysis would have shown that their claimed climate benefits are much less certain than the Applicant is currently trying to assert and that there is realistic potential for the proposed facility to perform worse, with respect to climate impacts, than landfill.

***IEMA GHG Mitigation Hierarchy (paragraphs 27 to 43). The representation suggests that an alternative approach of “Do Not Build” has not been adequately considered. The reasonableness of future baseline against which the Proposed Development is assessed is also queried.***

65. The Applicant’s statement on internal page 96 of REP3-040 that landfill is the “reasonable alternative” that they adopted does not address UKWIN’s case that sending waste untreated to landfill is not a “realistic worse-case baseline” as expected in the IEMA Guidance.

66. Or, to put it another way, the Applicant fails to address the potential that alternative fates for the waste that they wish to rely upon for feedstock might have lower GHG impacts than their chosen baseline of sending waste untreated to landfill.

67. As noted by UKWIN at paragraphs 33 and 39 of REP2-066:

Alternative approaches that have not been adequately considered by the Applicant could result in more of the material that the Applicant is relying on as feedstock being reduced, re-used, or recycled rather than being incinerated (domestically or abroad) or landfilled.

The Applicant’s failure to consider better ways that the waste could reasonably be managed throughout the lifetime of the proposed Medworth plant means that they are not comparing their development against a baseline which constitutes a “realistic worst-case” within the context of showing how the proposed development might have an adverse impact or that the significance of any claimed carbon saving should be given less weight because similar or better savings could be achieved through other means.

68. The Applicant has not disputed that there are other alternative fates that would result in lower impacts than sending waste untreated to landfill, nor do they dispute that they have not quantified the potential impacts of those potential alternative fates.

69. These failures undermine their GHG assessment because the assessment is premised on comparing the proposal against their assumed landfill baseline.

70. These failures also increase UKWIN’s concerns regarding how the Applicant has not appropriately assessed their proposal against their landfill baseline through their failure to credit biogenic carbon sequestration in their landfill baseline figures.

71. Sending waste to landfill is not in and of itself a clearly defined scenario.

72. For example, there are opportunities to remove recyclable material prior to first biostabilising and then landfilling the remainder. The Applicant's ongoing failure to compare their proposal against a 'best-in-class' landfill option (giving credit for biogenic carbon sequestration) undermines both their GHG assessment and their claims to follow IEMA guidance in general and any suggestion that they apply the IEMA's GHG Mitigation Hierarchy.
73. As set out at paragraph 31 of UKWIN's REP2-066 the IEMA's GHG Mitigation Hierarchy calls upon applicants to "evaluate the basic need for the proposed project and explore alternative approaches to achieve the desired outcome/s".
74. If the proposed Medworth project's desired outcome is to prevent the landfilling of approximately 600,000 tonnes per annum of untreated waste then there are numerous alternative approaches that could achieve this desired outcome (including reducing this residual waste by providing reuse facilities, and/or by introducing pre-treatment prior to landfill, and/or by diverting some or all of the waste to produce Sustainable Aviation Fuel) that have not been given serious consideration.
75. To the extent that the Medworth proposal would displace material which might otherwise have been reduced, re-used or recycled, then clearly all of these options would have significantly lower GHG emissions than the Medworth plant.
76. Furthermore, to the extent that the Applicant is overstating the assumed GHG impacts from landfill they are understating the relative net adverse GHG impacts of their proposed project.
77. As such the Applicant's baseline assumptions go against IEMA guidelines in a manner that clearly undermines the Applicant's assessment of overall carbon impacts.

***Decarbonisation of the electricity grid (paragraphs 44 to 57)***

78. As set out above, and as explained in further detail in UKWIN's other submissions, the Applicant's approach to accounting for the decarbonisation of the electricity grid is unsatisfactory and goes against the PAS 2080 principles of relevance and accuracy.
79. The Applicant has not changed their approach, and as such UKWIN's concerns remain valid.

80. Within the context of Recommendation 8 [REP1-096 electronic pages 138-149 in the ‘Displacing other sources of electricity and/or heat’ section our Good Practice Guidance] UKWIN explained that assuming new incineration capacity would simply displace electricity generated through CCGT is out of step with current Defra guidance, including the guidance set out in Footnote 29 of the Government’s EfW Guide to the debate, which reads as follows:

“...When conducting more detailed assessments the energy offset should be calculated in line with DECC guidance using the appropriate marginal energy factor”.

81. The Applicant has not engaged with the detail and substance of the evidence UKWIN set out in paragraphs 44-57 of REP2-066, and the associated evidence base used as the source for this section of REP2-066, and as such no additional responses are necessary.

82. However, we would like to note that the Applicant does not engage whatsoever with UKWIN’s argument at paragraph 41 of REP2-066 that the Applicant’s assessment of CCGT only covers unabated CCGT and that they do not compare their plant against abated CCGT (such as Keadby 3).

83. As UKWIN noted at paragraph 85 of REP3-050: “The Applicant’s assumption that the Medworth facility would be displacing unabated fossil fuel powered generation is implausible and out of step with the power sector decarbonisation trajectory necessary for the UK to meet our net zero commitment”.

***Complete, consistent, transparent and accurate assessment (paragraphs 58 to 78)***

84. The Applicant offers nothing new in response to UKWIN’s references to the ways that the Applicant’s assessment fails to follow aspects of the IEMA and PAS 2080 guidance, e.g. with respect to the Applicant’s continued failure to provide a working spreadsheet.

***GHG quantification principles – biogenic carbon sequestration (paragraphs 79 to 88)***

85. The Applicant seems to have confused the issue raised by UKWIN with a different issue.

86. In REP3-040 the Applicant refers to having made allowance “for the proportion of non-fossil carbon sequestered in landfill” and how this “has been deducted from the landfill emissions”.

87. This entirely misses the point raised by UKWIN, which is that not only is sequestered biogenic carbon not emitted as methane but it is *also* not emitted as biogenic CO<sub>2</sub> (whereas if the waste were to be incinerated then all of the biogenic carbon would be converted into CO<sub>2</sub>).
88. The Applicant's failure to either credit landfill with avoided GHG emissions or to penalise EfW for relative net increases in GHG emissions, or to simply account for biogenic CO<sub>2</sub> in both sides of the equation, means that they have not made adequate allowance for biogenic carbon sequestration in landfill.
89. As such, UKWIN's comments on paragraphs 61-66 REP3-050, which build on our earlier comments in REP2-066, remain relevant:

Whilst it is correct to say that "only a proportion of the non-fossil carbon in residual waste is turned into methane" it is incorrect to suggest that the Applicant's calculations made allowances for the proportion of non-fossil carbon sequestration in landfill.

The Applicant's calculations, despite their claim, did not make a deduction in relation to the non-fossil carbon which is sequestered in the landfill.

This matter is addressed both in UKWIN's REP2-066 submission (at paragraphs 81-88) and in evidence from Equanimator provided on behalf of Rt Hon Stephen Barclay [REP2-064], notably in Appendix 5, as summarised in Table 2 (on electronic page 122 of REP2-064).

This failure is decisive in the comparative analysis, because when the calculations are adjusted to properly account for the sequestration of biogenic carbon in landfill then the GHG impact of landfill is reduced by 171,846 tonnes per annum, which makes the incinerator proposed for Medworth significantly worse than landfill with respect to GHG performance.

In addition to the relevant evidence provided by UKWIN at paragraphs 81-88 of REP2-066 and the evidence contained within REP2-064, further evidence on the importance of accounting for biogenic carbon sequestration was set out in REP1-096 (electronic pages 104-127) as part of UKWIN's Good Practice Guidance for Assessing the GHG Impacts of Waste Incineration.

Despite UKWIN's REP1-096 evidence on this topic the Applicant has similarly chosen to ignore, rather than meaningfully engage, regarding this crucial issue.

90. The Applicant has not corrected their significant failure to account for the biogenic CO<sub>2</sub> that would be released through incineration but avoided in landfill, and as such UKWIN's critiques regarding the Applicant's assessment's conflict with section 5.2 and page 17 of the IEMA Guidance in this regard remain pertinent.

***Significance – carbon intensity and impact on decarbonisation of the electricity supply (paragraphs 89 to 106)***

91. The Applicant does not dispute UKWIN's calculations showing that the proposed Medworth EfW facility could be expected to generate electricity with a carbon intensity of 621 tonnes of fossil CO<sub>2</sub>e per gigawatt hour of electricity generated.

92. As explained at paragraph 99 of REP2-066, this level of carbon intensity implies that the electricity generated by the proposed Medworth plant "would have a higher carbon intensity than unabated CCGT and far higher than the current and future grid average, in turn indicating that the Medworth proposal could be expected to hamper Government efforts to decarbonise the electricity grid supply".

93. As noted at paragraph 105 of REP2-066, and on electronic page 168 of REP1-096, the Climate Change Committee has advised that: "In a Net Zero world EfW facilities are likely to be significantly higher carbon than other forms of energy production..."

94. The Applicant has not demonstrated that their proposed EfW for Medworth would be an exception to this rule.

***Weight to be given to the Applicant's claimed climate change benefits (paragraphs 107 to 115)***

95. As was made clear at ISH4, the Applicant is claiming a GHG benefit and the weight to be given to that benefit can be partially or wholly diminished due to the uncertainty regarding the claimed benefit actually being delivered.

96. At ISH4 the Applicant's comments confirmed that there is already significant variability in waste composition and that their assessments were premised on a set of assumptions regarding the potential alternative fate of the feedstock.

97. As such, this appears to place the Medworth NSIP application in a very similar position to Wheelebrator Kemsley North where, as per paragraphs 111 and 112 of REP2-066, the Secretary of State agreed with the ExA that "the available evidence casts considerable doubt on whether the 'net [climate] benefit' can be ascertained with any great certainty, given it is highly sensitive to the assumptions applied" and that as such "the matter should carry little weight in the assessment".



98. While the Applicant claims that it is the Government's approach that operational emissions are not a reason to refuse consent, this is an oversimplification of the matter that seems to distort the Government's true position.
99. The Applicant cites IEMA guidance to advance that argument that all impacts on GHG, both positive and adverse, should be considered 'significant'.
100. As UKWIN and others have provided evidence that the development could have an adverse GHG impact, if the Applicant's logic were followed this, this could be considered to constitute a significant adverse impact of the Medworth proposal.
101. In the case of ClientEarth, R v Secretary of State for BEIS & Anor [2021], the Court of Appeal found that when considering a proposed NSIP development the adverse impacts of GHG emissions from that development can be given "significant, or even decisive" weight in the planning balance and are even capable of being "treated as a freestanding reason for refusal", and that irrespective of policy a DCO could be refused if it fails on a "straightforward balance, setting 'adverse impact' against 'benefits'".
102. To quote from the judgment (which is submitted by UKWIN as part of our Deadline 4 bundle):
- "87. The force of the policy, therefore, is not that CO2 emissions are irrelevant to a development consent decision, or cannot be given due weight in such a decision. It is simply that CO2 emissions are not, of themselves, an automatic and insuperable obstacle to consent being given for any of the infrastructure for which EN-1 identifies a need and establishes a presumption in favour of approval. If they were, the policy need and the policy presumption would effectively be negated for certain forms of infrastructure supported by EN-1, and those essential provisions contradicted. Paragraph 5.2.2 does not diminish the need for relevant energy infrastructure established in national policy or undo the positive presumption. But nor does it prevent greenhouse gas emissions from being taken into account as a consideration attracting weight in a particular case. How much weight is for the decision-maker to resolve. It follows that, in a particular case, such weight could be significant, or even decisive, whether with or without another "adverse impact". This, I accept, differs from the judge's conclusion, in paragraph 179 of his judgment, that greenhouse gas emissions are not capable of being "treated as a freestanding reason for refusal". (emphasis added)

104. First, the purpose of the balancing exercise in section 104(7) [of the Planning Act 2008 as amended] is to establish whether an exception should be made to the requirement in section 104(3) that an application for development consent must be decided 'in accordance with any relevant national policy statement'. The exercise involves a straightforward balance, setting 'adverse impact' against 'benefits'... (emphasis added)

103. This means that, even if the Secretary of State concluded that the proposal was in general accordance with relevant NPSs, it would still be open to Secretary of State to refuse permission for the Medworth incinerator proposal based on potential adverse GHG impacts.

104. Alternatively, the Medworth NSIP application could be refused based on a combination of potential adverse impacts that could also include, for example, the adverse impacts on recycling caused by the potential for the development to create or exacerbate local, regional or national overcapacity (in light of the draft NPSs), Government statements about the need to avoid EfW overcapacity, and incompatibility with achieving the targets in the EIP.

105. As such, it would be wrong to conclude that the incinerator proposal could not be refused in whole or in part on the basis of concerns regarding its high level of anticipated direct CO<sub>2</sub> emissions.

106. For the avoidance of doubt, UKWIN's case is that the Medworth proposal goes against both extant NPSs and the proposed updated NPSs, and that additionally the adverse impacts of the proposal outweigh the potential benefits (especially in light of the uncertainty surrounding these claimed benefits) and this would provide an additional basis for refusal.

107. UKWIN also notes that for this proposal the Applicant is requesting compulsory acquisition of land and rights over land.

108. As noted at paragraph 5.3.1 of the Applicant's Statement of Reasons [REP3-011], Section 122(3) of the Planning Act 2008 means it is necessary for the decision-maker to be satisfied that there is a compelling case in the public interest for the inclusion of powers of compulsory acquisition in the Order.

109. As set out at paragraph 5.5.4 of the Applicant's Statement of Reasons [REP3-011], the Applicant's justification for compulsory purchase relies in part on their claimed climate benefits. It therefore follows that uncertainty regarding whether or not those claimed benefits would be delivered, and the potential for adverse GHG impacts arising from the incinerator, could undermine the case for compulsory purchase.

110. As such, in addition to any ‘need to demonstrate need’ that can be found within current and proposed NPS policy, Section 122(3) requires that the Secretary of State must be satisfied of a ‘compelling case in the public interest’ and that “The public benefits derived from the compulsory acquisition must outweigh the private loss that would be suffered by those whose land is to be acquired”.
111. Given the lack of waste need for the plant, the uncertainty regarding claimed climate benefits, and the potential harm from EfW overcapacity, etc. there is clearly no compelling case to grant the Applicant the compulsory purchase powers it seeks, and the use of these powers would not be ‘proportionate’.

## **PLANNING POLICY AND NEED**

---

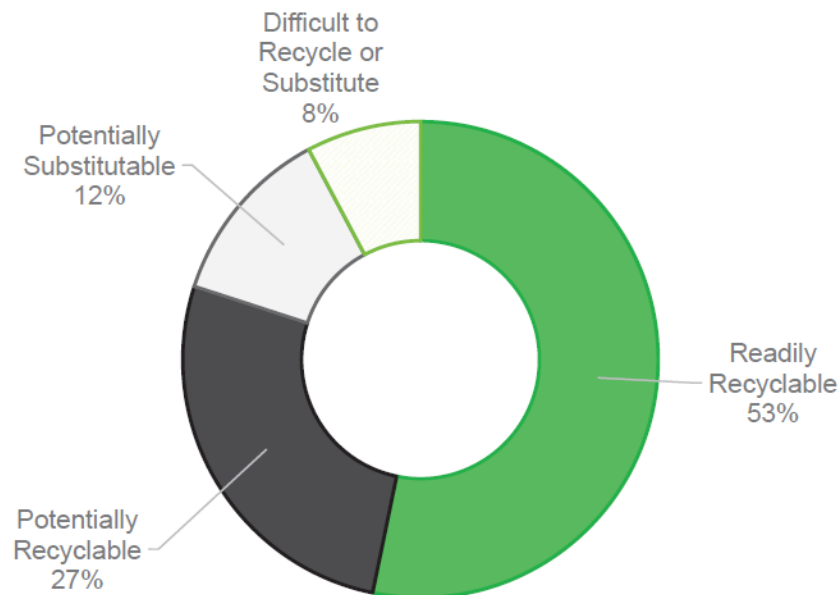
### **Planning Policy / Need for the Development**

112. UKWIN critiqued the Applicant’s D2 WFAA [REP2-009] in REP3-050 paragraphs 32-33 on electronic page 7 and throughout REP3-050 on electronic pages 15-49.
113. The Applicant’s latest response does nothing to alter the position set out in those documents, and it remains the case that the Applicant has not demonstrated that their proposed capacity for Medworth would not result in overcapacity at a local or national level.
114. Similarly, the Applicant has not demonstrated that their proposed new incineration capacity would not undermine the achievement of long-term recycling and residual waste reduction targets.
115. UKWIN’s concerns relate primarily to the Applicant’s methodology and to their misuse of the data sources rather than to the data sources themselves.
116. For example, as set out in REP3-050, the Applicant uses Tolvik’s November 2017 ‘UK Residual Waste 2030 Market Review’ to provide the estimate of future waste arisings used as a foundation of Table 5.2 of the Applicant’s D2 WFAA, but the Applicant then ignores the potential residual waste treatment options for those arisings set out in that same Tolvik report.
117. This means the Applicant overstates future arisings compared to future capacity even within the context of their own data source document.
118. As set out in REP3-050, the Environment Agency has confirmed that issues pertaining to the adverse impact of incineration overcapacity on recycling are planning issues rather than matters that can be addressed through the permitting system.

119. The Applicant's self-serving premise that incineration overcapacity cannot harm recycling goes against both current and emerging national policy, including EN-1 and EN-3, and against Government guidance, as well as previous Secretary of State decisions such as the Wheelabrator Kemsley North refusal.
120. As noted by UKWIN in REP3-050, draft DCO Requirement 14 provides no meaningful additionality over existing legal requirements, and so does not address the planning issues raised by the proposed Medworth capacity.
121. In REP3-050 UKWIN also noted how the North Lincolnshire Examining Authority (ExA) recently criticised wording similar to Requirement 14 on the basis that the associated proposed DCO Requirement did not, in the ExA's view, meet the tests of precision, necessity or enforceability.
122. As noted above, there is a legal basis for the Applicant to be required to demonstrate 'waste need' both within the context of the statutory requirement to satisfy the Secretary of State that the benefits would outweigh the disbenefits of the scheme, and with respect to justifying compulsory purchase powers.
123. The policy basis for the 'need to demonstrate need' and the policy basis for incineration's ability to harm recycling are discussed further by UKWIN in our D4 comments on the Applicant's National Policy Statement (NPS) Tracker [REP3-031], as well as elsewhere in our evidence.
124. In their REP3-040 response to UKWIN the Applicant refers to targeting only non-recyclable feedstock, but they have not actually performed an assessment of how recyclable their intended feedstock would be in light of Defra's findings that only 8% of the residual household municipal waste stream was difficult to recycle or substitute, and in light of the WRAP Cymru study which found that 74.5% of the Welsh mixed residual commercial and industrial (CI) waste stream "could have potentially been recycled" [REP2-066 paragraphs 144-147, REP2-066 electronic page 100, and REP1-06 electronic pages 150-158].

## CHART FROM DEFRA RESOURCES AND WASTE STRATEGY: MONITORING PROGRESS (2020)

Chart 13. Avoidable residual waste from household sources, England, 2017, proportion of total residual waste, by category (WP2a)



Source(s): WRAP (2020) [Quantifying the composition of municipal waste](#)

### Government policy on need to avoid incineration overcapacity

125. In their REP3-040 response to UKWIN the Applicant repeats a series of fundamental errors that calls into question their understanding of Government policy and the significance of the established statutory residual waste reduction targets.

126. UKWIN has already criticised a number of these failures in our REP3-050 submission, including on electronic pages 23-31 in the sub-section of UKWIN's D3 comments on REP2-09 and REP2-010 entitled 'Accounting for UK Government Recycling and Residual Waste Targets Being Met at Local and National Levels'.

### ONS Population Forecasts and focus on 2042/2043

127. It is curious that the Applicant is focused on ONS population forecasts for 2043, when the Government's legally binding waste reduction target relates to 2042.

128. While the Applicant refers to "Current Office for National Statistics (ONS) population predictions", they are not using the most recent predictions.

129. The 61,744,098 population forecast for 2043, upon which the Applicant relies, is from the 2018-based ONS forecast and not the latest forecast for England which is the 2020-based ONS forecast.

130. The more recent ONS forecast provides a lower figure for 2043 which is 60,113,364 people in England, and the 2020-based ONS population forecast for England in 2042 was 59,997,119 people.
131. Even if the Applicant was correct in anticipating that a number of EfW plants might shut down by 2042 (and the validity of this assumption is disputed by UKWIN) it is not appropriate to simply look at 2042 in isolation.
132. To meet the 2042 targets, residual waste (both per person and overall) will need to fall significantly from the level necessary to achieve the 2027 target.
133. As such, if the Applicant wishes to model the potential impact of the closure of some of the UK's oldest EfW plants, then they would also have to model the intervening years and not just skip to 2042.
134. At ISH3 the Applicant undertook to provide an updated WFAA at Deadline 5 (D5), and for this to include assessment of the intervening years.

### ***Geographical focus of England/UK***

135. The Applicant's discussion about waste outside of England simply shows how their approach of focusing on UK-wide waste arisings rather than focusing on England's waste arisings leads to unnecessary complexity when considering the implications of UK Government policy on English waste arisings and English residual waste treatment capacity.
136. UKWIN's analysis on electronic page 29 of REP2-066 avoided this problem by focussing exclusively on English waste arisings and English residual waste treatment capacity.
137. UKWIN intends to update our assessment in light of the Applicant's D5 WFAA, addressing any relevant matters raised by the Applicant with respect to our earlier analysis and updating our analysis to account for the latest available data.

### ***Proportion of residual waste available for incineration***

138. The Applicant also appears to assume that all residual waste would be available for EfW incineration.
139. The reality, as noted previously by UKWIN, is that only a proportion of residual waste would be 'suitable' for incineration, and not of that material would be available due to competing uses such as cement kilns and waste-to-SAF.

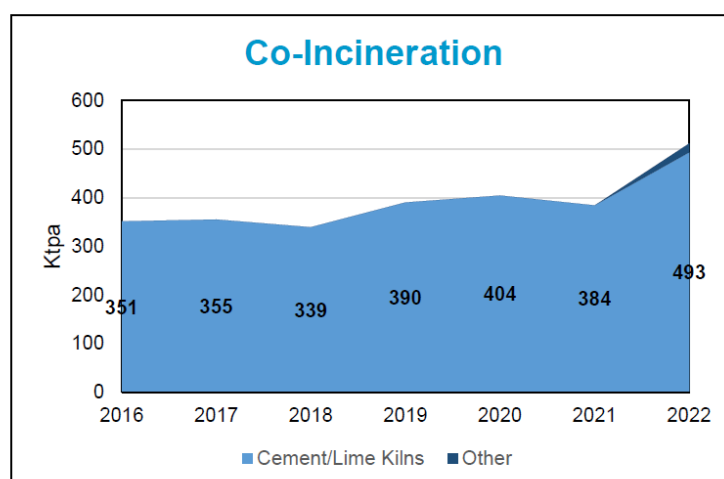
## ***Current and predicted incineration capacity***

140. The Applicant refers to a Tolvik figure of 19.4 million tonnes of 'operational capacity' by 2026 predicted in Tolvik's May 2022 report on the UK EfW situation in 2021 based on EfW capacity currently operational and under construction.
141. In their May 2023 report on 2022 EfW Statistics Tolvik update this figure to 20.7Mtpa of UK Operational EfW Capacity for 2027.
142. As previously noted by UKWIN, this figure does not take into account the impact of changes in composition that impacts on changes in calorific value (CV) and other changes that could result in existing plants operating at higher levels of operational capacity (because as CV falls, e.g. due to the removal of plastic from the residual waste stream, existing EfW plants are able to process more lower CV feedstock).
143. The Applicant refers to potential EfW closures without acknowledging how any such closures are likely to be far outweighed by new plants, including those that have already secured planning permission, entering construction.
144. It is far from 'inevitable' that a significant proportion of the existing UK EfW fleet will be decommissioned between now and 2042.
145. As we know from the Edmonton incinerator in North London, incinerators can operate for more than 50 years, and we know more generally that once built there is an economic incentive to keep plants going to make profit and recoup investment / initial construction costs, even if this means paying for periodic refurbishment.
146. These factors mean there is nothing inevitable about future EfW closures.
147. According to Tolvik's May 2023 report on 2022 EfW Statistics, "...as at December 2022 the capacity-weighted average age of the 60 UK EfWs which accepted waste in 2022 was 11.1 years".
148. This means that the UK EfW fleet is relatively young, and indeed a number of plants are currently under construction, and Edmonton is being replaced with a new larger facility.
149. When these factors are taken into account, it is hard to see how the Applicant can claim that "a large proportion of the existing operational capacity will be decommissioned" by 2042.
150. Several existing non-R1 plants already have plans in place to secure formal R1 certification from the Environment Agency (EA) or to be replaced by capacity that will be recognised as R1 compliant by the EA.

151. Some of these older plants (e.g. Eastcroft in Nottingham) are connected to district heating schemes, providing an additional incentive for operators to refurbish or replace plants rather than simply decommissioning them.
152. Within the context of existing and emerging NPS EN-1 and EN-3 it is important to consider all capacity that is 'already in development', not just capacity which is currently operational or currently under construction.
153. Tolvik's 20.7Mtpa figure for UK Operational Capacity does not include all capacity currently 'in development' but which has yet to enter construction.
154. According to Appendix C of the D2 WFAA [REP2-009], there is 3,354ktpa of EfW capacity in the WFAA area which is consented and not built, and 8,389ktpa of EfW capacity in the rest of England.
155. There are also currently a couple of NSIP proposals for large-scale schemes such as the 1.2 million tonne per annum (tpa) capacity proposed for Boston and the 760,000tpa proposed for North Lincolnshire which are 'in development' but which have not yet secured DCO consent.
156. As such, Tolvik's 20.7Mtpa figure does not consider all 'in development' incineration capacity.
157. Furthermore, the 20.7Mtpa figure does not include any non-incineration residual waste treatment capacity, such as that provided by cement kilns and waste-to-SAF facilities.
158. Tolvik's 20.7Mtpa figure also does not include either MBT or biomass capacity.
159. Tolvik's May 2023 report on 2022 EfW Statistics shows the upwards trend of residual waste (in the form of SRF) being accepted at UK cement and lime kilns, alongside the variation of existing biomass permits to allow them to burn RDF.

**GRAPHIC FROM TOLVIK'S MAY 2023 REPORT ON 2022 EFW STATISTICS**

**Residual Waste Co-Incinerated in the UK**





160. As the production of 1 tonne of SRF requires more than 1 tonne of waste, the figure of 493ktpa of SRF being co-incinerated in 2022 understates the impact of such increases on the level of waste available for conventional incineration.

161. In line with previous UKWIN comments, this upward trend can be expected to continue as cement and lime kilns increasing work to move away from depending only on fossil-based feedstocks.

### **Cement kilns**

162. At the bottom of electronic page 104 of REP3-040 the Applicant states:

**In terms of...the potential increase in the use of SRF at cement kilns, this has also been considered in detail in the updated WFAA (Volume 7.3) [REP2-009].**

163. UKWIN has searched the D2 WFAA for terms such as “cement” and “SRF”, but we were unable to locate the Applicant’s evidence regarding the use of SRF in cement kilns.

164. As explored as part of ISH3, UKWIN now understands that the error arose from the Applicant’s failure to appreciate how Tolvik excluded cement and lime kiln capacity in their total figure for EfW facilities.

165. In any case, Tolvik’s figures relate to UK EfW capacity, and so could not justify the Applicant’s failure to consider the potential for waste arising within the WFAA study area to be converted into SRF for use in cement kilns.

166. Furthermore, Tolvik’s figures relate to capacity as it stood in 2021 (or more recently 2022), and so does not consider future increases in waste being used to power cement kilns, e.g. in line with the clear upward trend illustrated by Tolvik’s most recent statistical report.

### **Waste-to-SAF capacity**

167. On both electronic page 104 and electronic page 113 of REP3-040 the Applicant offers the following commentary regarding the inclusion of waste-to-SAF capacity within the context of studying future waste fuel availability:

**“Whilst it is acknowledged that there are emerging technologies and initiatives which may contribute to the achievement of future patterns of sustainable waste management, such initiatives are embryonic in stage...”**

168. UKWIN’s D4 response is accompanied by media coverage of the rapid progress being made by those waste-to-SAF projects that received Government backing, including:

- a. An 'Altalto Immingham Project Update' provided by Velocys, published on 10<sup>th</sup> May 2023, announcing that "Altalto Ltd has completed the work necessary to claim the first tranche (£7 million) of the grant up to 31 March 2023. In addition, as planned, the project has obtained the first tranche of private funding for the period from 1 April 2023 from its existing private sector participants".
- b. An article published in The Engineer on 5<sup>th</sup> May 2023, entitled "", that sets out how "Production of SAF is expected to commence at the plant in 2027. When at full capacity, 600,000 tonnes of non-recyclable household waste – which would otherwise have been destined for incineration or landfill – will be converted into around 100 million litres of SAF annually" and how "Thanks to the strategic positioning of the plant, SAF is expected to be delivered directly to Manchester Airport using the existing jet fuel pipework infrastructure".
- c. An article entitled 'N+P 'actively seeking' waste for aviation fuel deal' published on 15<sup>th</sup> May 2023 by letsrecycle.com that opens: "The N+P Group has unveiled a partnership with the Saudi company Alfanar to source and process 1 million tonnes of waste per year to be used to produce sustainable aviation fuel (SAF)" and that goes on to explain how: "For the SAF plant with Alfanar, N+P says everyday non-recyclable household and business rubbish, contaminated recycling loads and MRF residues can all be sorted by N+P for use in the process, instead of 'being sent to landfill, burnt in incinerators or exported'".

169. These articles highlight the large scale of investment currently being directed towards progressing these three waste-to-SAF projects.

170. However, it is important to point out how the Applicant completely misunderstands, and therefore misrepresents, the point UKWIN is making about how these developments can be expected to impact on the availability of waste to be used as feedstock for the proposed Medworth incinerator, and instead provides a list of points in an attempt to illustrate how these alternatives would not "represent a credible alternative to the Proposed Development".

171. UKWIN is not suggesting, and has never suggested, that the Medworth site should be used to host either a cement kiln or a waste-to-SAF plant.

172. The simple point being made by UKWIN is that waste that the Applicant claims would, over the coming decades, be sent either to incineration or the landfill would also be in demand for other uses, such as co-incineration in cement kilns and as raw material for waste-to-SAF projects.

173. The Applicant's failure to adequately account for these alternative uses undermines the Applicant's assessment of whether or not their proposal is likely to cause or exacerbate EfW overcapacity, whilst calling into question the claimed benefit of the proposed Medworth facility which is premised on a binary choice between sending residual material to incineration or landfill.
174. The Applicant's point that "All the projects receiving Government funding, and which plan to use residual waste, sit outside the Study Area of this WFAA" misses the point that these Government-supported waste-to-SAF facilities, all of which appear to be progressing at pace, will require residual waste to use as feedstock, and as such that material would not also be available for use as feedstock for the proposed Medworth incinerator.
175. Although the three currently progressing waste-to-SAF projects are located outside the Applicant's Study Area they all impact on the availability of waste fuel across England.
176. If incinerators located within or near to the Applicant's Study Area were relying on feedstock that is subsequently diverted to produce SAF then those incinerators can be expected to increasingly turn to using waste arising within the Study Area to maintain operations.

### **The proposed capacity could undermine recycling and the circular economy**

177. In their response to paragraphs 127-143 of UKWIN's REP2-066, the Applicant claims that:

**An updated version of the WFAA (Volume 7.3) [REP2-009] has been produced which reflects a municipal recycling rate of 55-60%. These ambitious recycling rates take account of the Government's desire to see increasing quantities of plastics (and biodegradable waste) removed from the residual waste stream.**

**The WFAA (Volume 7.3) [REP2-009] has demonstrated that even with the ambitious recycling rates of 55-60%, future baseline levels of HIC residual waste are estimated to be between 21.0 and 24.5 million tonnes by 2030 – which would still equate to a national shortfall in residual waste management capacity of between 1.6 and 5.1 million tonnes per annum.**

178. The Applicant has not responded to the summary of representation to which they claim to be responding.
179. As per the summary, UKWIN's point was that "Reducing the amount of plastic in incinerator feedstock can increase the effective capacity of UK incinerators by 21-31% (with the lower end of the range assuming decreases in plastic coincide with decreases in food waste)".

180. The Applicant's comments seem to relate to the impact of recycling rates on residual waste arising, whereas UKWIN's point relates to the impact of recycling plastic on the calorific value (CV) of waste and therefore on the operational capacity of UK incinerators.
181. Whilst the Applicant refers to a 55-60% recycling rate, it should be noted that the UK Government's Waste Management Plan for England adopts a 65% recycling target for municipal waste by 2035.
182. Furthermore, even modelling a 65% household, industrial, and commercial (HIC) recycling rate would fall short of the Government's municipal recycling rate of between 70% and 75% anticipated as part of achieving the halving of residual waste by 2042 relative to the 2019 base year.
183. As discussed in UKWIN's D4 submission summarising the evidence provided by UKWIN at ISH3 (including at paragraphs 18-24), the 70-75% recycling rate is mentioned in the Government's consultation document on Environmental Targets, published 6<sup>th</sup> May 2022.
184. To meet the Government's waste reduction target England will need both to increase recycling and to reduce waste per capita, both of which will reduce the quantities of waste available for use as fuel.
185. The Applicant appears to fail in both respects, by both understating the impacts of future recycling and by overstating future waste arisings.
186. This failure is then compounded by the Applicant overstating how much of these arisings would be available as a fuel, and how much of this fuel would be available for EfW.
187. As noted above, UKWIN's REP3 and REP4 submissions already rebut the arguments advanced by the Applicant within REP3-040 electronic pages 106-108.
188. On electronic page 108 of REP3-040, the Applicant states that:
- "...even if it was considered that there were elements of the existing residual waste stream that could be recycled or re-used, without full analysis of that waste which is currently sent to landfill, it is not known what fraction or % of the residual waste stream could potentially be moved further up the hierarchy."**
189. It is quite shocking that the Applicant is premising their need case on diverting waste from landfill when, by their own admission, they do not know how much of the waste currently going to landfill could have been recycled.
190. UKWIN set out above a chart supplied by Defra showing "Avoidable residual waste from household sources, England, 2017" which is based on WRAP's work to quantify the composition of municipal waste.

191. As set out by Defra, this work found that 80% of the residual municipal waste stream was readily recyclable with current technologies or potentially recyclable with technologies in development as of 2017, and that only 8% of the residual municipal stream was “Difficult to recycle or substitute”.

192. As set out by UKWIN on electronic page 157 of REP1-096, a similar result for C&I was identified in a WRAP Cymru study carried out in Wales, which was published in 2017 and which found that 74.5% of the residual waste analysed could have potentially been recycled.

### **DEFRA’s concerns about the recyclability of residual waste**

193. In response to the points made by UKWIN regarding Defra’s concerns about the recyclability of residual waste at paragraphs 144-147 of REP2-066, and indeed on pages 150-164 of REP1-096, the Applicant merely repeats the points critiqued above.

194. The Applicant’s claim that they are targeting only waste that is currently landfilled, even if true (and UKWIN disputes this claim), does not undermine UKWIN’s point that because much of this material could be recycled or composted it should be recycled or composted instead of being viewed as potential incinerator feedstock.

### **Secretary of State’s concerns regarding incineration diverting from recycling**

195. The Applicant claims on electronic page 110 of REP3-040 that “Conclusions in respect of the Wheelabrator Kemsley North (WKN) application reflect the facts and circumstances of that particular case...” noting that in that instance “the ExA noted that WKN would conflict with the National Planning Policy for Waste because it would put at risk the achievement of revised recycling and composting targets in the Kent Minerals and Waste Local Plan”.

196. As such, the Applicant appears in their response to acknowledge that EfW is in fact capable of harming recycling at a local level.

197. This acknowledgement provides a useful starting point for consideration of the Medworth development proposal whilst undermining the points the Applicant makes elsewhere that EWC codes and DCO Requirements, etc., can be relied upon to sidestep the need to consider whether or not a specific development proposal might result in harm to recycling.

198. Of course, policy is concerned not just with impacts on the achievement of local recycling targets, but also with the achievement of recycling and reuse schemes in any area from which operators might source feedstock, the achievement of national recycling and waste reduction targets, and the need to avoid creating or exacerbating local or national EfW overcapacity.

199. In light of this policy context, the Applicant's acknowledgement that an ExA has – in relation of another incinerator proposal – concluded that the proposed new EfW capacity would be expected to put the achievement of recycling ambitions at risk should therefore increase the focus on whether or not the Medworth development would also be in danger of creating or exacerbating EfW overcapacity at a local, regional or national level within the lifetime of the proposed facility.
200. UKWIN has already provided evidence that the Medworth development could be expected to create and/or exacerbate EfW overcapacity and UKWIN has raised serious and unresolved concerns about the adequacy of the Applicant's original and D2 WFAAs.