

Comments on any other submissions received at D1

**UKWIN'S D2 COMMENTS ON NLGEPL'S
D1 RDF SUPPLY ASSESSMENT REV 1
(APPENDIX A TO REP1-006)**

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

DECEMBER 2022



SUMMARY

UKWIN has various concerns regarding the Applicant's RDF Supply Assessment Rev. 1 ('the Assessment') [Appendix A to REP1-006].

Recycling rates and timescales:

- The Government expects the target to reach 65% recycling by 2035 to be achieved. The Assessment should be considered on the basis that this target will be met, not least because allowing incineration capacity that would only have feedstock if the target were missed would jeopardise the achievement of that target. On this basis, it is clear from the Assessment that there is no need for the proposed capacity, let alone any sort of overriding need which would justify the use of this particular site.
- The Assessment should run to at least 2042, and ideally to at least 2050 in line with the proposed Environment Target and CCC advice respectively.
- The Assessment should assess an ongoing fall in household waste per person and decoupling of C&I arisings from economic activity, as well as 70-75% recycling and the fall in residual waste in line with the proposed Environment Target. If need is only demonstrable with low recycling or high arisings, then this clearly indicates the proposed capacity competes with achieving Government ambitions.

Treatment capacity:

- The Assessment understates the existing capacity by at least 1.1Mt. Correcting this figure would increase existing capacity to more than 17.3Mt.
- Some existing permits can be expected to be varied in the medium term to allow increased capacity as a result of falls in plastic reducing the CV.
- R1 status of existing plants is not relevant to the need assessment. Contrary to the Assessment's approach, all existing capacity should be included as existing plants, unless it can be clearly concluded that an existing plant would not be refurbished. At present those plants without R1 status do not do have it because there is little incentive to pay for the certification. These facilities are likely to qualify as R1 if they applied for this status. Older plants only need to meet the 0.60 threshold, and newer plants were designed with being able to achieve the 0.65 threshold in mind.
- It is not safe to assume that plants will be shut down due to a lack of carbon capture in 2035. If plants are shut down, it is not safe to assume that the proposed Flixborough plant would meet future CCS requirements.
- The Assessment should include c. 1Mtpa+ of cement kiln SRF capacity.
- The Assessment appears to include waste material that would be unsuitable or unlikely to be feedstock for a mixed waste incinerator.

INTRODUCTION

1. This document comments on the Applicant's RDF Supply Assessment Revision 1 produced by AFRY ('the Assessment'). While the cover of the document provides a date of 1st December 2022, it is titled as a document from November and the Applicant states in REP1-006 that Revision 1 is "based on the latest available information from October 2022".
2. UKWN's submission is focussed on the degree of robustness of the Assessment in demonstrating a need for the development in terms of a need for the proposed incineration capacity throughout its operational lifetime and whether the plant would contribute to local or national overcapacity. The policy context and planning implications of this matter are set out within UKWIN's Written Representation.
3. Unless otherwise stated, references to page numbers, paragraph numbers, tables and figures relate to the Assessment.

KEY DIFFERENCES IN POSITION IDENTIFIED BY UKWIN

4. The issues highlighted below will be refined and expanded as the basis for the Applicant's position becomes clear. The table below summarises UKWIN's current view of key differences between the position taken by the Applicant in the Assessment and the position UKWIN believes ought to be adopted for such an assessment.
5. The issues identified by UKWIN provide examples of how the Applicant overstates the demand for the proposed incineration capacity and understates the potential level of local or national overcapacity. If a matter is not listed below, that does not mean that it is a matter where UKWIN agrees with the Applicant's Assessment. Where necessary, issues set out in the table are explored further in relevant sections of this submission.

Table 1. Key disputes relating to RDF Supply Assessment

Issue	Applicant Rev 1 Approach	UKWIN Position
Recycling rates, waste reduction, and timescales		
1. Achieving 65% recycling target	"This [capacity] gap will gradually close (at the national and local level) by 2035 if Government recycling targets are met, but recent plateauing of recycling rates means there is significant uncertainty as to whether these targets will be met." (Para 5.1.1.1 on p. 43)	The Government expects the target to reach 65% recycling by 2035 to be achieved. The Assessment should be considered on the basis that this target will be met, not least because allowing incineration capacity that would only have feedstock if the target were missed would jeopardise the achievement of that target.

Issue	Applicant Rev 1 Approach	UKWIN Position
2. Timescale of assessment	Assessment runs to 2035	The Assessment should run to at least 2042, and ideally to at least 2050 in line with the proposed Environment Target and Climate Change Committee (CCC) advice.
3. Range of recycling rates and household residual waste scenarios considered	<p>65% central recycling rate, with '68% target' and 'lower recycling' sensitivities (Figs 9 & 10 on p. 28; Figs 12-13 on p. 30-31 & Figs 15-18 on p. 38).</p> <p>"4% reduction of waste generated per person is assumed until 2030" and this is combined with population growth estimates to forecast future household waste arisings (p. 45).</p>	The Assessment should assess 70-75% recycling and the fall in residual waste in line with the proposed Environment Target. The continuation of the 4% annual reduction should also be modelled to continue until 2042 and 2050. If need is only shown when lower levels of recycling and/or higher levels of residual waste arising are assumed, then this indicates that the proposed capacity would be competing with Government ambitions.
4. Future C&I waste arisings in England	<p>England base case is total C&I annual growth of 1.3% from 2022 to 2035 resulting in C&I residual arisings remaining stable (Fig 4 on p. 22; Para 3.6.1.3 on p. 17).</p> <p>Yorkshire & Humber and East Midlands base case C&I arisings remains stable (as per Fig 6 on p. 23).</p>	The Assessment should assess residual waste falling in line with the proposed Environment Target to halve residual waste.
Treatment capacity		
5. Existing incineration EfW capacity	<p>16.3Mt of existing EfW capacity as of October 2022, of which 12.7Mt is operational and 3.6Mt is under construction (Table 6 on p. 27; A.4 Table 6 on p. 50 and A.4 Table 7 on p. 51)</p> <p><i>(Note: For Table 6 the Operational EfW includes R1 and non-R1 capacity. As set out below, around 2Mt of this existing capacity is discounted from the Assessment's figures on potential treatment capacity)</i></p>	We would attribute 514kt more tonnes of capacity to the Assessment's existing capacity. We would also include the 595Kt of capacity at "Wren Power and Pulp (Rivenhall Airfield)" as 'under construction' rather than 'consented'. Combined, this would increase existing capacity by 1,109Kt, resulting in a revised total figure of more than 17.3Mt. Some existing permits can be expected to be varied in the medium term to allow increased capacity as a result of falls in plastic reducing the CV.

Issue	Applicant Rev 1 Approach	UKWIN Position
<p>6. Treatment of existing incineration EfW capacity that does not have R1 status</p>	<p>Exclude non-R1 operational capacity from assessment of treatment capacity (Fig 9 & 10, p. 28; Fig 12, p. 30; Fig 13, p. 31).</p> <p>R1 status of existing plants is “a significant factor in considering the capacity gap”.</p> <p><i>(See also ‘Likelihood of existing plants being able to achieve R1 status’, below)</i></p>	<p>R1 status of existing plants is not relevant to the need assessment.</p> <p>The Assessment’s approach of only considering ‘Currently operating EfW R1’ capacity results in underestimating existing capacity.</p> <p>All existing capacity should be included as ‘existing plants’ unless it can be clearly concluded that an existing plant would not be refurbished (or replaced). On this basis, it is clear from the Applicant’s calculations that there is no need for the proposed capacity, let alone any sort of overriding need that would justify the use of this particular site.</p>
<p>7. Likelihood of existing plants being able to achieve R1 status</p>	<p>“The remaining facilities (representing 2 million tonnes per year) are generally older and less efficient and are unlikely to achieve R1 status and as such are regarded as disposal facilities” (Para 3.7.2.3 on p. 25).</p>	<p>At present those plants without R1 status do not do have it because there is little incentive to pay for the certification.</p> <p>These facilities are likely to qualify as R1 if they applied for this status and/or could secure recovery status as part of refurbishment.</p> <p>Older plants only have to meet the 0.60 R1 threshold, and newer plants were designed to be capable of achieving the 0.65 R1 threshold.</p>
<p>8. Assumption that all existing plants would be fitted with carbon capture by 2035</p>	<p>“Assuming all capacity is required to have carbon capture by 2035, to comply with the Net Zero Strategy...” (p. 39; also Figs 15-18 on p. 36-38 as described on p. 35).</p>	<p>It is not safe to assume that plants will be shut down due to a lack of carbon capture in 2035.</p> <p>If plants are shut down, it is not safe to assume that the capacity proposed for Flixborough would meet future CCS requirements.</p>
<p>9. Alternative residual treatment capacity</p>	<p>Omits SRF capacity from cement kilns.</p>	<p>The Assessment should account for c. 1Mtpa+ of SRF capacity at cement kilns.</p>

Issue	Applicant Rev 1 Approach	UKWIN Position
Feedstock composition		
10. Suitability of proposed waste included in the household and C&I streams	Set out in A.2 (Table 2) and A.3 (Table 3) (p. 46-47).	The Assessment appears to include waste material that would be unsuitable or unlikely to be feedstock for a mixed waste incinerator.

RECYCLING RATES, WASTE REDUCTION, AND TIMESCALES

6. The Assessment states: “This [capacity] gap will gradually close (at the national and local level) by 2035 if Government recycling targets are met, but recent plateauing of recycling rates means there is significant uncertainty as to whether these targets will be met”.¹
7. Figure 9 of the Assessment indicates that if all the Assessment’s base assumptions are correct then there would be incineration overcapacity in England by around 2030 in a 68% recycling scenario and almost no capacity gap by 2035 in a 65% recycling scenario.²
8. Figure 10 indicates a slight capacity gap based on the base assumptions, but still does not show a level of capacity gap that demonstrates a need for the capacity proposed for Flixborough.³
9. Figures 12 and 13 indicate that even if a small proportion of the consented capacity with a ‘higher probability’ of coming forwards is built then the level of incineration overcapacity would be significant even in the ‘lower recycling sensitivity’ at both a national and Yorkshire & Humber and East Midlands basis.⁴
10. This means that, before we even get to the various ways in which the Assessment overstates the demand for the incinerator, there are clear concerns about the compatibility of the Flixborough proposal with higher recycling targets.
11. The potential for incineration to harm recycling is set out in more detail in UKWIN's Written Representation (WR).

¹ Para 5.1.1.1 on p. 43

² ‘Treatment Capacity in England’. p. 28

³ Treatment capacity in Yorkshire & Humber and East Midlands (kte)’. p. 28

⁴ ‘Potential treatment capacity in England including consented projects which are not committed’ p. 30 and ‘Potential treatment capacity in Yorkshire & Humber and East Midlands including consented projects which are not committed (kte)’ p. 31

12. As set out in UKWIN's WR, the potential adverse impacts on Government targets would be even greater if the proposal were assessed against the Government's target to halve residual waste by 2042 which Defra states represents a 70-75% recycling rate.
13. Despite the pre-amble to the introduction to the Rev 1 RDF Supply Assessment stating that "This RDF Supply Assessment Version 1 seeks to address both adopted and **emerging** national Government policy" (**emphasis added**) it fails to adequately do either, and completely fails to consider the impact of residual waste halving in line with the UK Government's proposals.
14. The Assessment should assess the proposal based on the magnitude of fall in residual waste arisings anticipated by Defra, which is associated with the consultation documents for the Environmental Target for residual waste reduction [REP1-024].
15. At the very least, rather than the Assessment being based on a 4% annual reduction of waste generated per person inevitably coming to an end in 2030⁵, the Assessment should consider the impact on total and residual household arisings forecasts of the Assessment's anticipated 4% annual reduction continuing until (or beyond) 2042.
16. As set out in UKWIN's WR, the Government expects the target to recycle 65% by 2035 to be achieved. The proposal should be assessed on the basis that this target will be met, not least because allowing incineration capacity that would only have feedstock if the target were missed would jeopardise the achievement of that target.
17. Furthermore, as set out in UKWIN's WR, the Assessment should run to 2042 at earliest, and ideally to 2050, in line with the Government's proposed Environment Target to halve residual waste [REP1-024] and the relevant Climate Change Committee (CCC) advice [as per the CCC's June 2022 "Progress in reducing emissions – 2022 Report to Parliament"⁶].
18. If a need for the proposed capacity is shown only when lower levels of recycling and/or higher levels of residual waste arising are assumed, this indicates the capacity would be competing with Government ambitions.

⁵ p. 45

⁶ For example, at page 394 the CCC recommends that "Defra should urgently complete and publish an up-to-date assessment of residual waste treatment capacity needs for the UK out to 2050, consistent with committed and proposed targets..."

Use of GVA to predict future C&I arisings

19. Para 3.6.1.3 of the Assessment states: “C&I waste is projected forward in line with economic growth in the commercial and industrial sectors, measured by gross value added (GVA). C&I waste is projected forward in line with economic growth in the commercial and industrial sectors, measured by gross value added (GVA)”.
20. This approach ignores the Government’s ambition to (continue to) decouple economic growth from growth in residual waste arisings.
21. The Government’s 2011 Waste Review set out how: “A key aim of this review is the decoupling of waste from economic growth”. The ambition to decouple waste arisings from economic growth is reflected in multiple Government metrics, including those used for the Government’s December 2018 Resources and Waste Strategy.
22. For example, the Resources and Waste Strategy includes the following:
 - a) **Raw material consumption:** Reduce £ GVA per tonne. “We need to guard against consuming finite raw materials and use them efficiently. This is echoed by the commitment in the 25 Year Environmental Plan to double resource productivity by 2050”;
 - b) **Total waste generated:** Reduce tonnes per capita. “We want to minimise the amount of waste we create because a portion of it will be lost to the circular economy and so have to be replaced by using virgin materials with associated carbon emissions...”; and
 - c) **Total residual waste generated per capita:** Reduce tonnes per capita. “We want to minimise the amount of residual waste that we create because it is a loss to the circular economy and so will have to be replaced by using virgin materials with associated carbon emissions. Residual waste is also an indicator of avoidable waste in that residual waste will include material that could have been recycled”.
23. Additionally, with respect to the Government’s approach to reducing raw material consumption relative to GVA, Defra’s November 2022 ‘Resources and Waste Strategy – Monitoring progress report’ highlighted success with this aim of decoupling resource use and GVA, stating on page 16 that: “Between 2001 and 2019, England’s gross value added largely trended upwards and increased by 39% overall, while across the same period, raw material consumption (excluding fossil fuels) fell by 15%...Resource decoupling can be said to occur when the economy grows without a corresponding increase in resource consumption. As GVA has increased while the material footprint has decreased, this suggests that absolute decoupling between economic output and raw material consumption has taken place between 2001 and 2019”.

24. The sector where there is likely to be the greatest correlation between economic activity and waste arising is in relation to construction, demolition and excavation (CDE) waste. However, this material is largely either inert or recycled and so it is not particularly relevant to assessing demand for waste incineration capacity.
25. Despite the clearly integrated Government commitment to decoupling economic growth and waste arising, the Assessment's approach appears to assume that any increase in GVA will result in an equivalent increase in C&I arisings, without take into account any decoupling between the two.
26. In any case, if the Assessment is to assume growth in waste arisings will directly follow increases in GVA, it is notable that their assumptions of annual GVA increases are based on the September 2022 briefing from the House of Commons Library (produced by Oxford Economics) whilst lower GVA figures are provided in the more recent November 2022 briefing⁷, as set out below.

GVA (real terms) annual increase from 2020/2022 to 2030

Region	September 2022 Briefing	November 2022 Briefing
	Annual GVA increase	
England	+1.35%	+1.2%
East Midlands	+1.16%	+1.1%
Yorkshire and Humber	+1.03%	+1.0%

TREATMENT CAPACITY

Existing incineration EfW capacity

27. Tables 6 and 7 of the Assessment⁸ set out the existing incineration capacity (operational or under construction) in England. As the Feedstock capacity figures from these two tables are elsewhere combined, the precise distinction between 'operational' and 'under construction' is not particularly relevant.
28. However, the inclusion of a plant within these tables and the plant's assumed level of feedstock capacity is relevant for an assessment of feedstock availability.
29. Presumably because the Assessment was only updated to October 2022, it lists the capacity at 'Wren Power and Pulp (Rivenhall Airfield)' as being consented when it should now be counted as under construction.

⁷ Regional and National Economic Indicators [SN06924], published 18th November 2022 (XL spreadsheet)

⁸ p. 50-51

Existing incineration capacity omitted from the Assessment (ktpa)

Facility	Applicant capacity	UKWIN capacity	Difference
Rivenhall Airfield	0	595	595

30. And as set out below, UKWIN also believes that the Assessment’s feedstock capacity figures are too low for several facilities that were included as existing capacity:

Capacity difference for the Assessment’s existing plants (ktpa)

Facility	Applicant capacity	UKWIN capacity	Difference
Protos	400	500	100
Tyseley Energy Recovery Facility	350	441	91
Avonmouth Resource Recovery Centre	300	377	77
Allington EfW Plant	500	560	60
Bolton	85	120	35
Newhaven	210	242	32
Newhurst	350	375	25
Integra South West (Marchwood)	200	220	20
Sheffield	225	245	20
Battlefield	90	102	12
Drakelow	169	180	11
Portsmouth Energy Recovery Facility	210	220	10
Leeds	180	190	10
Integra North (Chineham)	102	110	8
Wolverhampton EfW Plant	115	118	3
Total			514

Treatment of existing incineration EfW capacity that does not have R1 status & likelihood of existing plants being able to achieve R1 status

31. In addition to updating capacity figures, one of the major changes in approach between Rev’s 0 [APP-036] and 1 [REP1-006] of the Applicant’s RDF Supply Assessment is that the former includes all existing operational capacity whereas the latter excludes 2 million tonnes of ‘non-R1’ capacity.

32. Paragraph 3.7.2.3 of the Rev 1 assessment states that: “Of the 48 operational facilities, only 36 of these have achieved ‘R1 status’, meaning that they have achieved the efficiency threshold required for the facility to be classified as an energy recovery facility rather than a disposal facility. The remaining facilities (representing around **2 million tonnes per year**) are generally older and less efficient, and are unlikely to achieve R1 status and as such are regarded as disposal facilities. **This is a significant factor in considering the capacity gap**, given that non-R1 facilities are below the proposed Project in the waste hierarchy” (emphasis added).⁹

⁹ P. 25

33. Paragraph 3.7.2.6 of the Rev 1 assessment states that: "...Non-R1 facilities are not included as incineration without energy recovery is lower down the waste hierarchy than the proposed Project".¹⁰
34. If this matter was genuinely "a significant factor in considering the capacity gap" then it is curious why the exclusion of non-R1 incinerators was not part of the original Rev 0 assessment.
35. Setting aside discrepancies in the Applicant's approaches, we think that the approach adopted in Rev 1, and its failure to include capacity claimed to be 'non-R1' as a sensitivity, is clearly misguided and undermines the Applicant's estimate of existing capacity.
36. One of the important implications of the Applicant's Rev 1 approach is therefore that it could result in a 'capacity gap' being mis-identified. In such circumstances providing additional incineration capacity to bridge the supposed 'gap' could be expected to give rise to just the sort of incineration overcapacity that the Government clearly wishes to prevent.
37. In this regard, we note the terms used by the Government to express their position (e.g. as set out in Draft EN-3 and as stated to Parliament as the Government's adopted position) that "...proposed plant must not result in over-capacity of EfW waste treatment at a national or local level".
38. For the avoidance of doubt, we further note how the term 'EfW' – within the context of the phrase "EfW waste treatment" – is used on page 77 of the 2018 Resources and Waste Strategy to include EfW plants that have not achieved R1 status, as follows: "In addition, we will work closely with industry to secure a substantial increase in the number of EfW plants that are formally recognised as achieving recovery status, and will ensure that all future EfW plants achieve recovery status".
39. Thus, we see that the Government includes non-R1 incineration as a form of EfW, meaning that any avoidance of EfW overcapacity should consider non-R1 incinerators alongside those incinerators that have been formally recognised as having achieved recovery status.
40. It is also clear, from their use of the term "formally recognised", that the Government is well aware that some incinerators, whilst capable of achieving or exceeding the R1 threshold, have not yet been formally recognised as R1-compliant facilities.
41. Additionally, while the Government expresses a strong desire to ensure that future plants achieve recovery status, they do not express any urgent desire to decommission existing non-R1 EfW plants nor do they require all existing plants apply for formal R1 certification.

¹⁰ p. 27

42. At present there is no strong financial incentive for an established plant with an established customer base to spend money obtaining formal R1 accreditation.
43. Incinerators that are set to be refurbished might hold off applying for R1 status until after the refurbishment has been completed.
44. For example, the operators of the Eastcroft incinerator in Nottingham have expressed their intention to secure R1 status in the future as part of their programme of adding a third line.
45. The R1 threshold derives from the Waste Framework Directive which was formally agreed in 2008. This means that all those building incinerators from 2008 onwards would have been aware of the advantages of building a plant capable of achieving recovery status and operators would have been familiar with the R1 formula requirements capable of future-proofing their proposals.
46. A grandfathering provision was adopted for existing plants, with the Directive allowing plants that came into operation before 1st January 2009 to meet the R1 requirement through the achievement of 0.60 R1 efficiency (as distinct from the 0.65 threshold for newer plants).
47. As such, while it is not possible to comment on any specific claims about facilities not being capable of achieving R1 – as the Rev 1 Assessment neither lists the 12 plants nor carries out indicative R1 calculations for these plants based on their current or potential performance – UKWIN has set out a strong case for the Assessment to include such EfW capacity.

Assumption that all existing plants would be fitted with carbon capture by 2035

48. Paragraph 3.9.13 of the Assessment indicates that the Applicant assumes that existing incineration plants that cannot fit carbon capture would shut down in 2035, stating: "...we think it is unrealistic to assume that all of the existing EfW fleet will be retrofitted with carbon capture, as many projects are not well-suited for this for various reasons. Assuming all capacity is required to have carbon capture by 2035, to comply with the **Net Zero Strategy**, then we project a capacity gap..." (**emphasis added**)¹¹
49. With respect to the Net Zero Strategy, cited by the Applicant to justify their assumption that incinerators without carbon capture could be forced to shut down by 2035, we note that the Applicant does not refer directly to anywhere in the Net Zero Strategy that states that this is actually the Government's intention.

¹¹ P. 39

50. The Net Zero Strategy instead makes clear, that the Government expects the relevant (power) sector to reduce GHG emissions by 80-85% by 2035 (relative to 1990 levels). This means that the Government expects the power sector (which includes energy generated by waste incinerators) to continue to emit some GHGs.
51. Under the heading 'Key features of the delivery pathway to 2037' the Net Zero Strategy goes on to explicitly state that for the power sector the Government expects this 15-20% of residual power sector emissions to include EfW emissions, stating: "...residual emissions will be limited to CCUS plants, unabated gas, and **energy from waste...**" (**emphasis added**).
52. If the Government intended to shut down all non-CCUS incineration plants by 2035, it is curious that they would expect those plants to continue to release residual emissions.
53. It makes more sense to assume that, in accordance with the Government's 25-Year Environment Plan, the Government will increasingly focus on removing plastic from incinerator feedstock, thereby freeing up existing and emerging incineration capacity to process non-fossil-based material.¹²
54. As set out in UKWIN's Overcapacity document, which accompanies UKWIN's WR, because plastic has a high calorific value (CV), the diversion of one tonne of plastic creates more than one tonne of spare capacity.
55. Furthermore, we note that the Applicant's Assessment states at paragraph 3.9.1.2 that "the Project is among the minority of pipeline projects which are well-placed to connect to a CCUS cluster".¹³
56. This appears to be an acknowledgment that the small amount of CO₂ that the Applicant now proposes would now count as CCUS for the purpose of any policies that would require genuine CCUS (e.g. 90%+ capture rate) in the future.
57. According to the National Infrastructure Planning website, the Humber Low Carbon Pipelines DCO application has yet to be submitted.
58. In terms of the Flixborough incinerator proposal itself, without a pipeline connection, being *near to* (i.e. "only a few kilometres from") a potential cluster could be considered to pose the same logistical and other challenges as simply being 'outside' a potential cluster.

¹² As per p. 94 of the 25-Year Environment Plan, the Government will take action in relation to "Investigating ways to cut carbon dioxide emissions from EfW facilities by managing the amount of plastics in the residual waste stream. We will link this with any opportunities to recycle more plastics or reduce the amount used".

¹³ p. 39

59. One of the challenges of carbon capture is getting the carbon into the pipeline, and if the proposed incinerator is not directly able to pipe the carbon into the pipeline then it would presumably have to go through the same processes as any other project outside a cluster, i.e. converting the CO₂ gas into a liquid form for transport and then back into a gaseous form for storage.
60. These highly energy-intensive procedures increase the cost, the logistical challenges, and the environmental harm of the carbon capture process and in effect pose the same problems for all plants that are outside of an established cluster.
61. Paragraph 1.2.1.7 of the Assessment states: "...The Applicant proposes seeking a separate consent to connect to the East Coast Cluster to enable the long-term storage of up to 650,000 tonnes of carbon dioxide per year..." However, that Application is not under consideration as part of this examination, and it should be considered speculative at best.

Alternative residual treatment capacity & suitability of proposed waste included in the household and C&I streams

62. The Assessment appears to largely assume that all residual waste would be available for treatment at municipal waste incinerators. However, this is not a safe assumption, not least because some residual waste is not combustible or could cause operational problems if sent for incineration.
63. As noted in UKWIN's Written Representation, the Applicant's written summary to ISH1 [REP1-015] states on page 27 for Ref 25 that: "In a dynamic market, we also have the ability to 'choose' where our waste comes from and therefore the composition of the fuel".
64. The Carbon Assessment [REP-054] similarly predicts being picky with waste, not only assuming that it would only accept waste which was first converted into RDF but also stating at paragraph 9.1.1.6 that: "...monitoring of the biogenic carbon content of the RDF used at the site will be undertaken to give confidence that the net benefit in GHG emissions is being maintained or improved upon"
65. If the Applicant decides to do this, for example to secure feedstock which is in line with that assumed in the carbon assessment [APP-054] then this would limit the waste available to the plant and could increase the distance that it would have to travel.
66. Despite themselves raising this possibility, the Applicant fails to adequately consider the implications of project-specific feedstock requirements on the availability of feedstock to the project.

67. One alternative treatment route available for residual waste is conversion into Solid Recovered Fuel (SRF) to be used to generate heat at cement kilns.
68. In their 'Residual Waste Infrastructure Review (12th Issue)', dated 7th August 2017, Eunomia estimated that around 1 million tonnes of waste will be used in UK cement kilns by 2030.
69. This figure could be far higher by 2035, especially if the UK ETS covers burning waste at incineration plants but not at cement kilns.
70. Despite this, the Assessment makes no provision for cement kilns and co-incineration capacity impacting on feedstock supply.
71. Paragraph 3.7.2.6 of the Assessment states that: "We assume exports of waste cease after 2023".
72. The Assessment should provide sensitivity analysis showing the impact of continued RDF export, at current levels, beyond 2023.

LACK OF TRANSPARANCY

73. We note that the Assessment document often displays tables and graphs without providing all of the associated underlying data. This makes it difficult or impossible to assess the reasonableness of the conclusions reached and the sensitivity of those conclusion to changes in key variables.
74. For example, while Table 6 on page 27 of the Assessment provides figures for household and residual C&I waste forecasts for 2026, the underlying figures for overall waste arisings and recycling rates for that year which led to those figures are not supplied.
75. Furthermore, the values included in Table 6 are only for 2026, and so values for future years, such as 2035, are not shown.
76. Similarly, the various charts depict forecasts for residual waste arisings, but do not provide the precise values estimated for each year and do not show how these values are broken down between household and C&I waste streams.
77. Finally, even when data is provided it is sometimes rounded to million tonnes (Mt) and this means that the values presented often do not sum even in circumstances where the underlying but unstated values might sum. Values in table ought to be given in tonnes or kilotons rather than megatonnes for greater transparency and to more readily allow scrutiny.
78. We would ask that the Applicant's evidence be given less weight if they decide not to address this lack of transparency.