Response to REP 9.68 / REP6-032

UKWIN'S D7 COMMENTS ON APPLICANT'S SECOND REPORT ON OUTSTANDING SUBMISSIONS

Proposed Development:
Boston Alternative Energy Facility (BAEF)

Proposed Location:
Nursery Road, Boston, Lincolnshire

Applicant:
Alternative Use Boston Projects Limited

Planning Inspectorate Ref:
EN010095

Registration Identification Ref:
20028052

FEBRUARY 2022

United Kingdom Without Incineration Network

COMMENTS ON APPLICANT'S RESPONSE TO SECTION 2.4 ('UKWIN RESPONSE')

Response to Applicant comments on Table 2-15 UKWIN's response to the Applicant's response to UKWIN's oral submission at Issue Specific Hearing 2 on Environmental Matters [REP4-020] (REP5-020) {REP6-032}

No.	Applicant Response	UKWIN comment
Comments on National Policy Statements		
1-15	In response to paragraphs 1 to 15, see the Applicant's response (Document 9.64) to UKWIN's Deadline 3 comments on the Applicant's response to the ExA's written Question Q12.0.7 (REP3-036). In addition, at paragraph 11 (also paragraph 16 of its Deadline 1 submission) UKWIN is selective in that it omits to refer to the granting of DCO consent for Kemsley WK3 on 19th February 2021…	In contrast to WKN, WK3 (also known as 'K3') was not a focus of UKWIN's pervious submissions because WK3 was not considered to be of particular relevance as the WK3 application related to increasing generation capacity at a consented facility rather than justifying a new plant being built. As noted in the WK3 Applicant's Case, summarised within the ExA's WK3 report: "The 'practical effect' of the K3 Proposed Development would simply be K3, as constructed under its existing permission, being capable of generating an additional 25.1MW and processing an additional 107,000 tonnes of waste per annum. Granting development consent would not result in any additional external physical changes to K3 as consented and the layout and appearance of the facility would remain as per its consented design".
	…The Secretary of State (SoS) for Business, Energy and Industrial Strategy (BEIS) made a direction under Section 35 of the Planning Act 2008 to treat the Proposed Development as one for which development consent is required. In view of the generating capacity of the Project WK3, this was determined with respect to National Policy Statement EN-1 and EN-3 which had primacy. Project WKN was not considered to be an NSIP project, here primacy was given to the statutorily adopted development plan which included the Kent Minerals and Waste Local Plan…	The Applicant seems to place great weight on the fact that the ExA's November 2020 report recommending refusal of WKN considered the proposal on the basis that it was not an NSIP. In doing so, it appears that the Applicant may have overlooked, or failed to appreciate, the associated Secretary of State Decision Letter dated 19 February 2021. While the ExA assessed WKN on the basis that it was not an NSIP and recommended refusal, the Secretary of State took a different approach by deciding to treat WKN as an NSIP, but nevertheless agreed with the ExA's conclusions on the various matters and decided that refusal was still merited. It was subsequently decided by a court that the Secretary of State had made an error of law by treating WKN as an NSIP, but the judge decided not to offer any relief because it was accepted that the approach taken did not change the relevant conclusions. To elaborate, Paragraph 6.3 of the Secretary of State's WK3/WKN Decision Notice explains the distinction, stating: "As set out in above, sections 104 and 105 of the Planning

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	At 6.3.12 of the ExA report in relation to WKN the ExA concluded that the WKN Proposed Development would be in conflict with key policies of the Kent Minerals and Waste Local Plan.	Act 2008 set out the procedures to be followed by the Secretary of State in determining applications for development consent where National Policy Statements have and do not have effect. In both cases, the Secretary of State has to have regard to a range of policy considerations including the relevant National Policy Statements and development plans and local impact reports prepared by local planning authorities in coming to a decision. However, for applications determined under section 104, the primary consideration is the policy set out in the National Policy Statements, while for applications that fall to be determined under section 105, it is local policies which are specifically referenced although the National Policy Statements can be taken into account as 'important and relevant considerations'". Paragraph 6.4 of the SoS's WK3/WKN Decision Notice went on to explain that: "The Secretary of State adopts a different approach to the ExA's in this matter and is of the view that the whole application (including the benefits and impacts of WKN) fall to be considered under section 104 of the Planning Act 2008. This means that in the consideration by the Secretary of State, more weight has been given to the National Policy Statements. However, the Secretary of State does not consider that this different approach to the planning process results in a different conclusion to that reached by the ExA, namely that development consent should not be granted for WKN and that the benefits of WKN are outweighed by the non-compliance with policies elsewhere, in particular, the policies regarding compliance with the NPS EN-1 and the policies referencing both the waste hierarchy and local waste management plans in NPS EN-3". Thus, the Secretary of State treated the plant as NSIP (section 104) rather than non-NSIP (section 105) when making his determination to refuse WKN, and he agreed with the ExA's various conclusions regarding the adverse impact of the development on recycling even when treating the facility as an NSIP. Furthermore, Kemsley was not a case where a scheme was deemed to comply with national policy but was refused simply due to conflicts with local policy. As noted above, the SoS specifically cited WKN's non-compliance with *"the policies regarding compliance with the NPS EN-1 and the policies referencing both the waste hierarchy and local waste management plans in NPS EN-3".*

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		Subsequent to the issuance of the Decision Notice, in the case of *EFW Group Limited v. Secretary of State for Business, Energy and Industrial Strategy*, the High Court of Justice accepted the Secretary of State's case.[1] According to paragraph 76 of the judgment: "In considering these questions in relation to the present case it is important to observe, firstly, that the contentions of the claimant in relation to any error of law in the ExA's report have not been upheld. Secondly, in relation to the waste hierarchy and fuel availability, the Secretary of State adopted the ExA's conclusions. He also adopted the ExA's conclusions in relation to all of the other environmental and infrastructure considerations which were examined, and in paragraphs 4.18-4.20 accepted the overall conclusions reached by the ExA in relation to each of the individual proposals. The defendant noted at paragraph 4.6 his view that determining the whole application under section 104 of the 2008 Act did not have a material impact on the overall outcome in relation to the case. This observation is further justified at paragraphs 6.4-6.6 in which the defendant explains that whilst taking a different approach to the ExA and, as a result of considering both projects under section 104 of the 2008 Act according 'more weight' to the NPS, nevertheless his balancing of the issues did not result in a different conclusion to that which was reached by the ExA, namely, that the benefits of the WKN project were outweighed by its non-compliance with policies in NPS EN-1 and EN-3 related to the issues associated with the waste hierarchy and local waste management plan policies". Paragraph 77 of the judgment went on to note how: "The effect of the defendant's conclusions set out above is that the defendant's assessment of the planning balance did not favour the grant of consent for the WKN project whether it was considered under section 104 of the 2008 Act (with the additional weight being afforded to the NPS in assessing the merits), or whether it was assessed under section 105 of the 2008 Act. It follows that on the basis of the defendant's assessment, the overall outcome of the application would have been the same even if he had adopted the decision-making framework contained within section 105 of the 2008 Act. That assessment is unsurprising because, as the defendant's reasons explain, even applying greater weight to the NPS as

[1] Neutral citation: [2021] EWHC 2697 (Admin)

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		required by section 104 of the 2008 Act, and adopting a more favourable approach to the balance than that afforded by the ExA, the adverse impacts of the WKN proposal would still outweigh its benefits. It follows that the decision of the defendant would have been the same, and certainly the outcome would not have been substantially different, without commission of the error of law which has been identified in his decision, and therefore I have formed the view that the claimant is not entitled to relief by way of the quashing of the decision". Finally, Paragraph 78 of the judgment provides the conclusion that: "For the reasons set out above whilst I am satisfied that there was an error of law in the defendant's decision in relation to the application, in the very particular circumstances of this case I do not consider that the claimant is entitled to relief on the basis that the decision would have been the same, and certainly unlikely to have been substantially different, even if the error of law had not been committed by the defendant".
	…The full paragraph (4.41) is 'ExA sets out that, given the uncertainties in the Applicant's assessment of carbon benefits, the matter should carry little weight in the assessment of WK3 and WKN. However, the ExA notes that, while they are conjoined in the Application, there are differences between the two projects so that the 'environmental burden' of WKN should not apply to WK3. As far as the possibility of waste being diverted from landfill to fuel the two projects is concerned, the ExA considers that the projects would divert a significant proportion of waste from recycling rather than landfill.'…	An important difference between the two Kemsley project proposals was not that one was NSIP and one was not (as the Boston Applicant might be implying), but that WK3 had Combined Heat and Power (CHP) whereas WKN did not. As 4.14.75 of the Kemsley ExA's report put it: "…despite the uncertainties inherent in calculating the net carbon benefit of the K3 Proposed Development's practical effect, I recognise that the K3 Proposed Development as a whole could be said with higher confidence to perform better in GHG emission terms, due to its greater efficiency as a CHP facility". In contrast to K3, according to pages 18-19 the Boston facility's CHP Assessment (APP-036): "…based on the low heat demand in the surrounding area and taking into account the distance and sparse nature of heat users resulting in technical and commercial challenges for proposed routes, the Facility will…not be developed as a CHP scheme..." Furthermore, the Boston Applicant has notably acknowledged that their proposed scheme might have similar GHG impacts to landfill. For example, at page 7 of REP2-009 (Document 9.25) the Applicant states that: "The DCO application for the Proposed Development includes a climate change resilience assessment in Chapter 21 Climate

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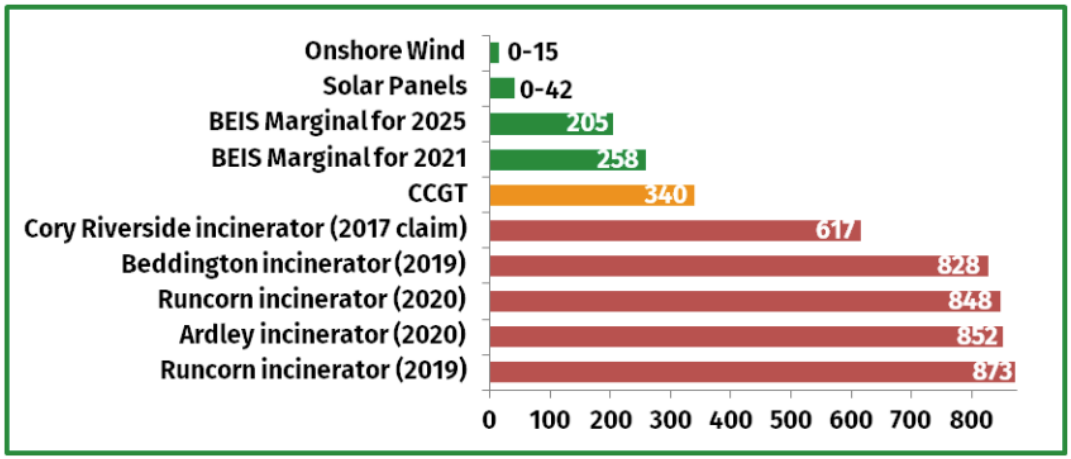
		Change of the ES (document reference 6.2.21, APP-059). The assessment concludes that it is 'likely that GHG emissions from the Facility would be lower or similar when compared to landfilled waste streams'", and UKWIN has provided unrebutted evidence to demonstrate that the Boston plant could perform significantly worse than landfill in terms of carbon performance once relevant factors, such as biogenic carbon sequestration in landfill and the progressive decarbonisation of the electricity supply and the high-carbon nature of the RDF feedstock, have been taken into account.
	As for Project WK3, Alternative Use Boston Projects Ltd considers that it has demonstrated (need case and Waste Hierarchy Assessment report (document reference 5.8, APP-037)) that the proposed development, as a development designed to meet a need to treat national RDF waste (arriving at the Facility by water) that may otherwise be exported, accords with the waste hierarchy, would not significantly prejudice the achievement of local or national waste management targets, and would not result in an over capacity of EfW waste treatment facilities.	UKWIN does not agree that need for the proposed capacity and its accordance with the waste hierarchy have been demonstrated for the Boston proposal. UKWIN's position – that the proposed 1.2mtpa of RDF treatment capacity, which would require around 1.6mtpa of 'raw' residual waste, would result in overcapacity which would prejudice recycling and that the Applicant has not met their burden in ruling this out – is based on evidence that has already been provided, and so does not need repeating. We note that the Applicant has not disputed UKWIN's evidence set out in REP5-020 paragraphs 6-9 that Government is not opposed to the notion that limiting waste incineration is a desirable policy goal, and that Government recognises that allowing incineration to expand without appropriate controls could be harmful to their national recycling ambitions. We also note that the Applicant has not disputed UKWIN's evidence that the Committee on Climate Change has warned about the adverse impacts on recycling and reuse from incineration being left to grow unchecked, and how combined with the Government's other statements this supports UKWIN's interpretations of EN-3 and draft EN-3 (2021).

Comments on The Applicant's Need Assessments / Isochrone assumptions / waste plans		
16-18	The Applicant has presented the most up to date waste data on those wastes being deposited in landfill in the UK. Detailed data on recycling rates for C&I wastes are not available, as noted in the previous response REP4-020…	The Applicant has not responded to UKWIN's point that while it might not be possible to provide a single precise figure for how much C&I recycling rates would improve, it would be possible for the Applicant to model a number of potential improved C&I recycling scenarios to show the impact of increased C&I recycling on the availability of feedstock. In the event that the Applicant does provide a revised assessment to take account of future improvement of C&I recycling rates, we ask that, in line with our previous submissions, this revised assessment also take account of: (a) the impact of the missing existing incineration capacity (i.e. the more than 1 million tonnes of capacity that has come online since 2019), and the capacity which entered construction from 2021 and was therefore not included in the Tolvik report on 2020 EfW statistics; (b) the fact that any additional RDF incineration capacity, including the Boston facility itself, would require more than 1 tonne of raw residual waste for each tonne of RDF feedstock (due to dewatering); and (c) anticipated increases in residual waste being used to produce SRF for cement kilns.
	The Applicant has used a 2-hour travel time in the Addendum to Fuel Availability and Waste Hierarchy Assessment (document reference 9.5, REP1-018) to define the waste catchment area that wastes could potentially be transferred to the indicative port locations and then transferred to the proposed Facility…the catchment areas allow the quantity of wastes within the areas to be defined. This provides a practicable method of defining a catchment in recognition that RDF is being transferred to port locations throughout the UK and is currently…exported overseas.	The Applicant has not provided evidence to demonstrate that all 12 of the ports they cite are currently being used to export RDF overseas, nor that suitable ships from those ports regularly travel to Boston. As such, the Applicant's assumptions cannot be considered practicable, and could reasonably be described as 'speculative' and therefore the Applicant's assessments that are based on those unsupported assumptions should be afforded little or no weight in the planning balance. For the reasons set out in REP6-042, it is plausible that instead of being evenly distributed between all dozen ports, that a large proportion of any feedstock for the proposed Boston facility could come from a very limited number of ports, and thus be associated with a much more significant adverse impact on local incineration and recycling facilities. As UKWIN notes in REP6-042, the dozen ports listed by the Applicant already have significant incineration capacity within a 2-hour isochrone, including for example nearly 5 million tonnes of existing incineration capacity for Ridham and for Sheerness.

Comments on Greenhouse Gas emissions and Climate Change impacts – UKWIN calculation of carbon intensity of exported electricity		
19-23	The Applicant has no further comments but notes that UKWIN used the upper end of the range of carbon and fossil carbon contents presented in 'Climate Change – Further Greenhouse Gas Emissions Analysis and Consideration of Waste Composition Scenarios' (document reference 9.6, REP1-019). As stated in The Applicant's Response to UKWIN submitted at Deadline 5 (document reference 9.64, REP5-009), the range of fossil carbon contents from 40 – 60% were considered to provide an indication of potential waste compositions that could be processed at the Facility, due to uncertainties in future Government policy and individual behaviours. Therefore, the adoption of the 60% fossil carbon content only presents the upper end of potential emissions from the Facility.	Based on the Applicant's further comments we have re-approached our assessment and it appears that our calculations require upward amendment. The initial assessment made by UKWIN was based on the assumption that the 609,649 tonnes per annum figure for CO_2 in document 6.2.21 of the Applicant's Environmental Statement (APP-059) was the Applicant's assumed level of total CO_2 emissions as it was labelled 'Total CO2 Emissions from Thermal Treatment Process with CO2 Recovery'. However, on researching the figure further for the purpose of carrying out the sensitivity analysis which the Applicant calls for, it appears from page 4 of Document 9.6 (REP1-019) that, despite the Applicant's label, this figure was not in fact the total CO_2 emissions but actually only the assumed fossil CO_2 emissions. As such, the process we previously carried out to convert total CO_2 into fossil CO_2 was redundant for that calculation, as the figure was already the Applicant's assumed level of fossil CO_2. This means that our revised estimate of the fossil carbon intensity of the electricity to be exported, based on the Applicant's central scenario, is 953 grams of fossil CO_2 per kWh of exported electricity (i.e. 609,649 tonnes of fossil CO_2 divided by 640,000 MWh of exported electricity).[2] This figure takes account of the Applicant's 80,000 tpa of claimed benefits from CO_2 recovery. 953gCO_2/kWh fossil carbon intensity is significantly higher in fossil carbon intensity terms than UKWIN's previous estimate, but more accurately reflects the assumptions adopted by the Applicant. For sense checking, this revised estimate of 953gCO_2/kWh fossil carbon intensity can be compared with operator-reported performance of incinerators operating in England as set out on page 81 of UKWIN's GHG Good Practice Guidance, and reproduced overleaf.

[2] 640,000 MWh is based on the Applicant's assumptions of exporting 80MW for 8,000 hours of operation (80MW x 8,000 hrs = 640,000 MWh)

COMPARISON OF FOSSIL CARBON INTENSITY OF ENERGY EXPORTED TO THE GRID FROM DIFFERENT ELECTRICITY GENERATION METHODS (GCO_2E /KWH)



This indicates that the Boston plant could be on the upper end of fossil carbon intensity for incineration plants, even after the proposed CO_2 recovery plant is taken into account.

For sensitivity analysis, the fossil carbon intensity can also be calculated based on the other fossil CO_2 figures provided by the Applicant in Table 1 of the Applicant's Further GHG Emissions Analysis and Consideration of Waste Composition Scenarios (Document 9.6 / REP1-019) based on the formula: (Fossil CO2 ÷ MWh exported) × 1,000 (to convert tonnes into grams and MWh into kWh).

The figures provided by the Applicant are as follows:

Table 1: Waste Composition Emissions Analysis

Parameter	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
Total carbon (% by weight)	20	20	20	30	30	30
Fossil carbon (% of total carbon)	40	50	60	40	50	60
Mass of fossil carbon in waste (tonnes)	96,000	120,000	144,000	144,000	180,000	216,000
Fossil derived CO_2 emissions (tonnes)	352,000	440,000	528,000	528,000	660,000	792,000

For the purpose of this analysis we subtract 80,000 tonnes of CO_2 from these figures to take account of the Applicant's claims of CO_2 removal set out in APP-059.

Carbon Intensity of Applicant's Sensitivity Scenarios					
	Scenario 1	Scenario 2	Scenarios 3 & 4	Scenario 5	Scenario 6
Fossil CO2	352,000	440,000	528,000	660,000	792,000
CO2 Recovery	-80,000	-80,000	-80,000	-80,000	-80,000
Net Fossil CO2	272,000	360,000	448,000	580,000	712,000
MWh exported	640,000	640,000	640,000	640,000	640,000
Fossil carbon intensity (gCO2/kWh)	**425**	**563**	**700**	**906**	**1,113**

This indicates that even in the 'best case' of Scenario 1 (which UKWIN has previously shown to be unrealistically optimistic), which is based on 20% carbon content of the RDF feedstock, the plant proposed for Boston would have a higher carbon intensity than CCGT gas which is around 357gCO2/kWh.[3]

However, as noted by UKWIN on pages 15-16 of REP6-042, other applicants for RDF facilities are anticipating a total carbon content of 35% by weight, which is higher than the highest figures used by the Boston Applicant (which was 30% as per the Applicant's Scenarios 4-6).

If this 35% carbon content assumption were applied to 1,200,000 tonnes of RDF feedstock then this would mean the Boston facility would emit 1,540,000 tonnes of CO_2 (1,200,000 x 0.35 x 44/12). It is therefore possible to estimate the fossil carbon intensity of electricity exported based on this level of CO_2 emissions applied to each of the Applicant's different assumed levels of fossil carbon percentages taking into account the claimed 80,000 tpa CO_2 removal.

[3] As per Page 7 of BEIS Valuation of energy use and greenhouse gas: Background documentation (October 2021)

Carbon Intensity of 35% Total Carbon Scenarios			
	40% Fossil	50% Fossil	60% Fossil
Fossil CO2	616,000	770,000	924,000
CO2 Recovery	-80,000	-80,000	-80,000
Net Fossil CO2	536,000	690,000	844,000
MWh exported	640,000	640,000	640,000
Fossil carbon intensity (gCO2/kWh)	**838**	**1,078**	**1,319**

As previously noted we expect the actual fossil fraction to be far higher than 40%. However, this analysis indicates that even at 40% fossil carbon content then, if one accepts the Applicant's claimed MWh export figure, the electricity exported by the plant could have a fossil carbon intensity that is more than double the intensity of CCGT gas (or that it would be just under twice the carbon intensity of CCGT for 40% fossil carbon based on the Applicant's Scenario 4).

The evidence set out above shows that UKWIN's claim that the Boston plant would have a high fossil carbon intensity holds true for a wide range of feedstock scenarios and counters the Applicant's suggestion that our previous estimate of 572 g CO_2 was unrealistically high.

Indeed, the revised evidence set out above indicates that UKWIN's previous estimate was significantly below what could be anticipated for the Boston plant based on the Applicant's evidence regarding the adverse carbon impacts of their proposed facility.

The Applicant has therefore failed to disprove UKWIN's case that, based on the Applicant's own assumptions, the Boston facility would hamper the UK's efforts to decarbonise the electricity supply.

Comments on Greenhouse Gas emissions and Climate Change impacts – weight of carbon benefits or disbenefits		
24-27	The Applicant maintains that the processing of waste at the Facility will result in lower levels of greenhouse gas emissions compared to existing waste treatment pathways, including landfill and export to Europe. In addition, the Facility will have the added benefit of providing a continuous and reliable source of 80MWe electricity to the UK grid.	As set out above, the Applicant's carbon assessments have not claimed that the processing of waste at the Boston Facility would necessarily result in lower levels of GHG release when compared with landfill, but rather those assessments claimed that the Boston Facility would result in GHG levels that could be lower or *similar* to landfill. Additionally, the Applicant has not offered any rebuttal of substance to UKWIN's evidence that if account is taken of the impacts of biogenic carbon sequestration in landfill and/or the progressive decarbonisation of the electricity supply, and/or a more realistic RDF composition, then the processing of waste at the Boston Facility would result in worse climate impacts than sending the same waste to landfill. With respect to comparing the Boston proposal with exporting the RDF to Europe, the Applicant's claim that the plant "will result in lower levels of greenhouse gas emissions compared to…export to Europe" is similarly undermined by their own evidence. The Applicant's climate change assessment (APP-059) does not directly compare processing of waste at the Boston facility with exporting the same RDF to Europe. The only scenario offered by the Applicant that includes a consideration of the climate impacts of exporting RDF to Europe (Table 21-23 on page 37 of APP-059) was based on only 50% of the RDF being exported to Europe, as set out on page 15 of that document. Had a rate of 100% RDF export been included in the Table (instead of or as well as 50%) then, using the Applicant's methodology, the climate impact of RDF export would range between 311,436 and 731,436 tonnes of CO_2e per annum (i.e. double the stated range of 150,000 – 360,000 tonnes of fossil CO_2e emission from the incinerator plus double the stated 5,718 tonnes of CO_2e from marine vessel movements). The centre of this range is 521,436 tonnes of CO_2e from exporting 100% of the RDF to Europe, which compares favourably to the Applicant's claimed level of CO_2 impacts from Boston, which the Applicant puts at 623,996 tonnes of CO_2e. One reason exporting RDF to Europe can have lower emissions is because European incinerators are typically connected to extensive (existing) district heating schemes and the lower temperatures in those countries mean that there is a higher year-round heat demand. As such, it is unsurprising that the Boston plant performs worse than European CHP incinerators.