

Town and Country Planning Act 1990 (as amended)

Planning and Compulsory Purchase Act 2004

The Town and Country Planning (Determination by Inspectors) (Inquiries Procedure)
(England) Rules 2000 (as amended)

**REBUTTAL OF APPELLANT'S
PLANNING (NEED) PROOF OF EVIDENCE**

ALAN POTTER

on behalf of Dorset Council

Appeal by Powerfuel Portland Limited
against the refusal by Dorset Council of Planning Application Ref.
WP/20/00692/DCC for the construction of an energy recovery facility with ancillary
buildings and works including administrative facilities, gatehouse and weighbridge,
parking and circulation areas, cable routes to ship berths and existing off-site
electrical sub-station, with site access through Portland Port from Castletown,

at Portland Port, Castletown, Portland, Dorset, DT5 1PP

Planning Inspectorate References:	APP/D1265/W/23/3327692
Dorset Council References:	WP/20/00692/DCC
Date:	28th November 2023

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Contents

Contents

1. Introduction.....	1
2.0 Critique of Mr Roberts' Proof	3
Generating a Baseline Value for Residual Waste arising in the Plan area in 2022 .	3
National Residual Waste Reduction Measures	8
Virtual elimination of biodegradable waste going to landfill from 2028.....	8
2042 Residual Waste Reduction Target.....	9
Recycling Targets.....	11
Constructing Municipal Waste Arising Scenarios: Scenario A (growth)	12
Constructing Municipal Waste Arising Scenarios: Scenario B (zero growth).....	14
Capacity.....	18
Response to Mr Roberts' specific criticisms of my method to generate residual waste arisings presented in the Council's Outline Statement of Waste Need	19

Appendices

Appendix 1: 5 year WDI data review	23
Appendix 2: Dorset Sub-region Output reconciliation.....	24
Appendix 3: Sensitivity for Uncoded Waste.....	25
Appendix 4: Testing Roberts' Assertion regarding reliability of WDI 2022.....	30
Appendix 5. Top 10 LACW recycling rates achieved by English WCA/WDA	33
Appendix 6 - Welsh Government Press Release 24 March 2021	34
Appendix 7 - DEFRA Written Answer 13th October 2022	36
Appendix 8 - Extract of Government Response on Simpler Recycling	37
Appendix 9 - Extract of Independent Review of the role of Incineration May 2022 ..	38

1. Introduction

1.1 This rebuttal proof is provided in response to Mr Roberts' proof of evidence. The evidence which I have prepared and provide in this Proof of Evidence is true and accurate to the best of my knowledge. I confirm that the opinions expressed are my true professional opinions. I have no conflict of interest and confirm that this Proof of Evidence has been produced with full cognisance of the rules relating to such matters adopted by the relevant professional institutions. I have not sought to rebut every matter in the Appellant's evidence with which I disagree and the fact that I do not rebut a point should not be taken as my acceptance of it.

1.2 To aid the inquiry, I have examined the key differences between my evidence and that of Mr Roberts and sought to identify the extent to which Mr Roberts' position is supported by evidence and, in consequence, provides a robust basis for an alternative analysis to that which I have taken in my main proof. Where I have found Mr Roberts' position to be supported by evidence, I have explored the implications of his assumptions for the Council's need case.

1.3 I have updated the Council's need case in light of the above exercise as appropriate.

1.4 In particular the Council's revised need case addresses the following aspects that are considered critical to the determination of this Appeal with respect to need:

Step 1: Baseline arisings of residual waste that may be suitable for incineration in the Plan area (being Dorset and Bournemouth, Christchurch and Poole (BCP)) in 2022. A key factor informing this is the breadth/ scope of the definition of residual waste applied so as to arrive at the baseline value.

Step 2: Projected future arisings of residual waste that may be suitable for incineration in the Plan area to 2050.

Step 3: Projected recycling rates for waste arising in the Plan area to 2050 that may otherwise be incinerated were the Appeal to be upheld.

Step 4: Assessed capacity available to manage arisings of residual waste that may be suitable for incineration in the Plan area.

1.5 When comparing the outputs of step 4 with the combined outcomes of steps 1-3 the size of any capacity gap for the management of arisings of residual waste that may be suitable for incineration in the Plan area during the life of the Appeal proposal can be determined, and hence the need (if any) for the proposed facility can be established.

Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

1.6 Necessarily the assessment is based on assumptions and expert judgement. I am qualified to make such judgements as I have advised the responsible Government department, Defra, of waste data modelling methods, being a sitting member of its waste data advisory working group, having produced numerous Waste Needs Assessments for Waste Planning Authorities to inform production of Waste Local Plans over the past 25 years including a number for Waste Planning authorities located in the south west of England, and having recently been appointed to the Office of Environmental Protection's College of Experts to advise on waste matters.

Findings

1.7 In the Table at the end of this rebuttal proof I set out the criticisms Mr Roberts presents in his proof, along with the findings of my further researches, the outcomes of which are included as Appendices. I have explored a number of sensitivities identified in Mr Roberts' proof, which relies on statements made by Tolvik, and present the outcome in the Appendices to this proof. Having undertaken this exercise I remain satisfied that the method I have used to arrive at a residual waste baseline value using WDI data in my main proof is robust. I remain of the view that a value of c185,000 tonnes of residual waste that may be suitable for incineration was produced in the Plan area in 2022 and that this amount can be expected to fall over time.

1.8 In order to ensure my assessment is even more robust I have undertaken a 'top-down' assessment of residual waste arisings, the outcome of which is also presented in this proof.

Conclusion

1.9 I conclude between the two methods applied that, to 2050 available residual waste arisings from the Plan area will be significantly less than the capacity of the plant proposed at this Appeal. Bearing in mind that the plant is intended to principally serve the Plan area, and the LACW produced within the Plan area is contracted for management elsewhere, this reduces the available tonnage of residual waste further. In addition, if capacity at the recently consented EfW plant at Parley, one of the sites allocated in the Dorset Waste Plan, of c60,000tpa is counted, the tonnage falls further. It should also be borne in mind that the EfW plant at Bridgwater (109,000 tpa capacity) is already accommodating the residues from the Canford Magna MBT plant, and so the residual waste need of the Plan area is already adequately provided for, without substantial landfilling or RDF export, and there is no apparent need for an additional plant of the capacity proposed in the Plan area.

2.0 Critique of Mr Roberts' Proof

2.1 This section of my rebuttal addresses each of the key aspects of the need case.

Generating a Baseline Value for Residual Waste arising in the Plan area in 2022

2.2 As identified above, a key variable in the assessment of need for additional capacity is the breadth/ scope of the definition of residual waste applied to arrive at the baseline value. I note that at Paragraph 3.4.4 of his proof Mr Roberts states:

‘iii. For the purposes of this appeal, I adopt the following description of residual waste (this being Tolvik’s definition, to whom I refer subsequently): “Solid, non-hazardous, combustible waste which remains after recycling either ‘treated’ (in the form of a RDF or SRF) or ‘untreated’ (as “black bag” waste)”. This is consistent with the DEFRA descriptions and only differs in that it excludes any separated non-combustible⁶ wastes. That is because, relative to the Appeal Proposal, we are only interested in mixed combustible wastes.’

2.3 However, at no point does Mr Roberts actually set out what specific waste (in terms of waste codes) his preferred definition of residual waste has been taken to encompass. Without setting this out in detail for examination it is not possible to confirm the data Mr Roberts is putting forward. In contrast I have, in my main proof (see Para A1.16), set out clearly what waste codes are included in my bottom-up assessment of residual waste, selected specifically to ensure that only waste suitable for incineration in its direct delivered form, is actually counted.

2.4 Figure 1 of Appendix 3 of my main proof sets out the process by which the waste codes applied to the baseline value have been arrived at through consideration of the waste types (and waste codes) to define residual waste included in the Schedule to The Environmental Targets (Residual Waste) (England) Regulations 2023, and hence by law. This identified waste falling under a total of 35 codes arose within the Plan area in 2022 that can be counted towards residual waste and, in turn, derived a total tonnage of 160,273 tonnes of waste, managed by incineration and landfill, reported in the Environment Agency WDI, as arising from the Plan area in 2022. This is split between 68,084 tonnes managed through incineration and 92,190 tonnes managed through landfill. Table 1 below sets out the waste by description and tonnages that appear in the WDI for 2022 and includes my commentary on what wastes were included and why. I note that the values displayed do not reflect those shown in Mr Roberts’ Table 3-2 which is said to be based on Tolvik’s review of the very same WDI data. Although I note that Mr Roberts refers to

¹ Footnote 6 to Mr Robert's proof states "By non-combustible, I mean a separated waste fraction whose CV falls below the minimum CV in the ERF firing diagram i.e. is lower than the plant is designed to take"

Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

“..certain adjustments...” having been made, but these adjustments and their basis have not been set out and should be for transparency’s sake.

Table 1: Component Wastes counted in Residual Waste Arising from Dorset & BCP in 2022 with commentary on inclusion in WDI residual waste value (tonnes)

Source WDI 2022 (after Environmental Targets (Residual Waste) (England) Regulations Schedule)

Waste Description	Fate (tonnes)		Commentary on Inclusion
	Incineration	Landfill	
Wastes from mechanical treatment of wastes	20,380	38,673	100% EfW and 50% to landfill
Mixed municipal waste	26,129	20,261	Yes- 100%
Combustible waste (refuse derived fuel)	20,932	0	Yes- 100%
Bulky waste	0	18,200	No – as would require pre-treatment which is outside scope of planning (and permit) application
Casting cores and moulds which have undergone pouring	0	11,308	No – non combustible
Non infectious clinical wastes	3	2,237	No -clinical waste is outside scope of planning and permit application
Minerals (for example sand, stones)	0	633	No – non combustible
Other particulates	0	574	No – non combustible
Wood	275	17	No – likely to be managed as biomass
Other engine, gear and lubricating oils	224	0	No -this is classed as hazardous waste which is outside scope of planning and permit application
Biodegradable waste	0	166	Yes- 100%
Wood containing dangerous substances	94	0	No -this is classed as hazardous waste which is outside scope of planning and permit application
Sludges and filter cakes	0	44	No – non combustible
Biodegradable kitchen and canteen waste	0	27	No – should be managed further up hierarchy at IVC or AD
Packaging containing residues of or contaminated by dangerous substances	0	26	No -this is classed as hazardous waste which is outside scope of planning and permit application
Sludges from on-site effluent treatment	23	0	No – non combustible
Plastics	0	14	No – sub 500t significance and likely to be managed via recycling if separately collected
Sludges from treatment of urban waste water	0	10	No – non combustible
	68,060	92,190	Total 160,250
Of which counted as combustible	67,441	39,764	Total 107,205

2.5 In seeking to determine the quantity of residual waste that may be suitable for incineration in his baseline year, Mr Roberts (see 3.4.28 et seq) has taken a different approach to that which I took in my main proof. I have also now used his approach applying what may be called a ‘top-down’ approach, to sense check the WDI data driven ‘bottom up’ approach taken in my main proof which is partly based on the data presented in Table 1 above. This follows the approach taken in the *DEFRA Detailed Evidence Report into the Resource Efficiency and waste reduction targets* published in April 2022 (CD9.32)

I note Mr Roberts states categorically that:

Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

“3.2.4 Finally, and for the avoidance of any doubt, the Appeal Proposal would be a merchant residual waste management facility, focussed primarily of the management of residual waste generated with Dorset and the BCP area, but in line with all such merchant plants, it would also be capable of serving a wider sub-regional commercial and industrial waste market.” (emphasis added)

This statement is significant in that he is making clear the case for the facility should be judged on whether need can be demonstrated for waste arising within the Plan area, for the life of the proposed plant. It should also be noted that the fact the plant is being promoted as a merchant facility means that the need case ought not to rely on receiving Local Authority Collected Waste (LACW), already managed under contracts let by Dorset Council & BCP Council respectively, until the mid to late part of the present decade at least. This approach is consistent with that taken by Tolvik in its modelling of available capacity at EfW plants it has considered in Mr Roberts' Scenarios.

2.6 At Paragraph 3.3.1 et seq of his Proof Mr Roberts first applies himself to the approach taken by the adopted Waste Local Plan (he refers to this as "DWP" which I take to be an abbreviation for 'Dorset Waste Plan') and Table 7 in particular (Section 3.3). I note that he expresses confusion about inclusion of Potential MRF Capacity in data line 4, and I agree this appears to be irrelevant to consideration of the shortfall. He then questions the inclusion of the 125,000 tpa capacity value in line 2 stating that he "*understands ... this relates to Canford MBT plant.*" My enquiries of the Council's Officers involved in production of the DWP revealed that his inference is correct in this case.

2.7 Mr Roberts goes on to contest the validity of the inclusion of the value of 125,000 tpa, as in his words "*circa 95,000 tpa of residual waste comes out the back end*", and so, as he concludes in para 3.3.4, only a value of 30,000 tpa ought to be counted against the capacity requirement although his data table 3.2 (page 32) gives a value of 34,444 tonnes. His footnote 5 then explains that he gets to a revised value of 309,000 tonnes of residual waste requiring management from the Plan area at 2028 and 329,000 tonnes at 2033 (note his Proof at 3.3.4 states 2023).

2.8 Having considered the points raised by Mr Roberts, I agree that the capacity of the Canford MBT plant that ought to be counted is that which equates to the reduction in mass due to the loss of moisture, and, on that basis, the value he presents in Table 3.2 ought to be applied (i.e. 34,444 tonnes). When deducted from the residual waste arising value presented in Table 7 of the adopted Plan this gives revised values of 304,600 tonnes at 2028 and 324,600 in 2033 respectively of residual waste still requiring management.

2.9 I note that Mr Roberts concludes at his para 3.3.5 that:

Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

Accordingly, the data presented in the DWP in relation to need, shows there is a significant and long-term requirement for new residual waste management capacity. Further, even if the projected residual waste arisings were to fall by 33% over time to circa 200,000 tpa, which would represent an 80% recycling rate across the combined LACW and C&I waste streams, based on the forecast arisings in Table 2 of the DWP, there would remain a demonstrable need for the Appeal Proposal

2.10 Aside from the question of what a reasonable recycling rate might be in the future, which I address later in this rebuttal proof, the key point here is whether the original forecast arisings set out in Table 2 of the DWP (from which Table 7's figure for projected arisings of residual waste is derived) remains sound when considered in light of more recent data. At paragraph A1.3 of my main proof I explain how the assumed growth rates applied to arisings of LACW and C&I waste from the Plan area have clearly been superseded by actual arisings data (in the case of LACW) and more current assessments of growth rates (in the case of C&I waste). Table 2 of my proof presents the outcome of applying revised, more realistic, growth rates to each of the contributing streams for residual waste suited to management through incineration. To assist the reader I have reproduced this Table below.

Table 2: LACW & C&I waste forecast for Dorset subregion applying revised Growth Factors 2015 baseline values - (Table 2 of main proof) (tonnes)

	2015	2018	2023	2028	2033
LACW	387,000	391,897	400,196	408,671	417,325
C&I waste	447,000	451,710	459,670	467,771	476,015
Total	834,000	843,607	859,866	876,442	893,340

2.11 I have taken this 'top-down' approach further in this rebuttal and considered the recycling rates applied to each of the contributing streams to determine the quantity of residual waste remaining to be managed. This can be derived from the values presented in Table 15 and Table 22 of the Background Paper 1: Waste Arisings and Projections (CD 12.35). For LACW the recycling rate used was 58.2% across the Plan period, and for C&I waste it was 73.2%. If these rates are applied to the revised values from the amended growth rates (shown in Table 2 above) the values for the remaining residual waste shown in Table 3 below are generated. This shows that applying the revised growth rates to the updated baseline values and the DWP recycling rates, the quantity of residual waste falls by c57,000 tonnes in 2033, giving a value of just over 300,000 tonnes of residual waste requiring management as compared with the value for 2033 presented in Table 7 of the DWP. It should be noted throughout this analysis that, in Mr Roberts' words, the proposal is for a merchant plant, and given the management of Plan Area LACW arisings is already

Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

contracted, inclusion of a value for LACW ought to be regarded with a degree of caution. I have however included it to ensure the widest scope of the possible need case has been explored.

Table 3: Residual Waste Arising from Dorset & BCP (tonnes)
Source Table 2 and accounting for recycling rates used in adopted Plan

Origin Waste Stream	2023	2028	2033
LACW	167,506	171,053	174,675
C&I	123,170	125,341	127,550
Revised Total	290,676	296,394	302,226

2.12 Allowing for the reduction of 90,600 tonnes from the capacity value counted in the DWP Table 7 of 125,000 tonnes (for the mass reduction offered by the Canford Magna MBT plant) the capacity gap would be 261,950 tonnes in 2028 and 267,782 tonnes in 2033 (302,226 minus 34,444). So, on the face of it, there is a projected residual waste management gap of between c262,000 tonnes and c268,000 tonnes in the early years of the life of the plant, were the Appeal to be upheld.

2.13 However I also note that Tolvik, in its modelling, uses a baseline value for C&I waste for the Plan area of 258,375 tonnes (154,098 tonnes (BCP) and 104,277 tonnes (Dorset)). If this combined baseline value is substituted for the DWP C&I waste value used in the calculation above to update Table 7, it gives the results shown in Table 4 below.

Table 4: Residual Waste Arising from Dorset & BCP applying Tolvik C&I baseline (tonnes)
Source Table 2 and accounting for recycling rates used in adopted Plan

Origin Waste Stream	2023	2028	2033
LACW	167,506	171,053	174,675
C&I	69,233	70,687	72,171
Total Residual	236,739	241,740	246,846

This means that applying Mr Roberts' MBT mass loss value of 34,444 tonnes per annum the capacity gap identified, falls to between 207,296 tonnes in 2028 (241,740 minus 34,444) and 212,402 tonnes (246,846 minus 34,444) in 2033. Again it should be noted that the inclusion of LACW is for comprehensiveness and ought not to be assumed to be available for the Appeal plant in the early years at least. If LACW is disregarded, a value of 72,171 tonnes of Plan area residual waste is derived (C&I residual waste only not subject to MBT).

2.14 The values for residual waste derived above do not account for the fact that a proportion of this waste will not be suitable for incineration as it will not be combustible. As can be seen in Table 1 above, which shows the composition of residual waste produced in the Plan area in 2022, only c107,000 of the 160,273

Rebuttal Proof of Mr Alan Potter BSc (Hons), FCIWM, CEnv, UKELA

tonnes of waste is identified as acceptable for incineration at the Appeal proposal. This equates to c67% of the total. If the values for residual waste derived above are adjusted to reflect this, they fall from 246,500 tonnes including LACW in 2033 and 72,171 tonnes excluding LACW in 2033 to c165,155 tonnes and c48,355 tonnes respectively. If Mr Roberts' MBT mass loss value is applied to the first value as it involves LACW, it falls to 130,755 tonnes of residual waste requiring management that may be suitable for incineration. These values are substantially lower than the capacity of the proposed plant subject to this Appeal.

National Residual Waste Reduction Measures

2.15 Having established that the waste arisings values in Table 7 of the adopted Plan ought to reflect the revised growth rates, and then updating the C&I waste baseline value to reflect that used by Tolvik, and then subjecting the results to a screening by analysis of composition to ensure residual waste would be suitable for incineration I now consider the measures that will affect the quantity of residual waste available for incineration beyond 2033, the end of the current Plan period.

2.16 It is important to note that since the time the Plan was formulated and eventually adopted a number of key Policy targets have been adopted by Government, for which account must be made when determining future need. In particular there has been:

1. a stated intention to achieve the virtual elimination of biodegradable waste going to landfill from 2028; and
2. adoption of a residual waste reduction target for 2042; and
3. adoption of municipal waste recycling targets for 2025, 2030 and 2035,

I address how each measure impacts recycling rates, and consequent residual waste production, below.

Virtual elimination of biodegradable waste going to landfill from 2028

2.17 Mr Roberts makes the following assertion at 3.4.17 of his Proof in connection with the above measure:

"v. The ambition of eliminating biodegradable waste from landfill by 2028 would significantly increase ERF demand".

However, this statement ignores the fact that the Government's intention is to achieve this aim primarily by introducing measures requiring the separate collection of food waste from households (by 2026) and businesses. This is stated in the

Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

Government's recent announcement about the introduction of 'Simpler Recycling'² as follows:

*"Municipal food waste collections will reduce the amount of food waste going to landfill, where it releases harmful greenhouse gases, helping to achieve our Net Zero strategy target to eliminate biodegradable waste sent to landfill from 2028. **Instead, where food waste is collected separately, it can be reprocessed to create organic fertiliser and biogas, which can be used to generate electricity, bolstering our energy security.**" (emphasis added)*

2.18 Therefore this measure would not mean more waste being sent for incineration. Rather the majority of biodegradable waste going to landfill will be diverted to bio waste treatment technologies such as Anaerobic Digestion and In Vessel Composting. Indeed, sending such waste to EfW would be contrary to the application of the waste hierarchy in priority order as required by law and the adopted Waste Plan as EfW sits below these bio-waste treatment methods in the waste hierarchy (see for example Figure 2 of CD 9.32). In fact, given the impending introduction of separate food waste collection, delivery of separately collected material to EfW would be expressly prohibited under recently introduced provisions via environmental permits.³ Therefore, the introduction of this measure cannot be expected to result in substantial quantities of additional waste requiring incineration as Mr Roberts states.

2042 Residual Waste Reduction Target

2.19 Mr Roberts reproduces sections of the Government's Environmental Improvement Plan 2023, which set out the following targets, at his Paragraph 3.4.16c. I have summarised these below:

c. The residual waste interim targets, by 31 January 2028:

Reduce residual waste produced per person by 24%.

Reduce residual waste in total tonnes by 21%.

Reduce municipal residual waste produced per person by 29%.

d. Long term target: By 31 December 2042, the total mass of residual waste in a calendar year does not exceed 287 kg per capita. [from 2019 levels]

2.20 When considering the application of the 2042 target it is important to consider the following:

1. The definition of residual waste is wide ranging and as such the waste that will be counted within the 287 kg per capita target extends well beyond the tonnage of waste targeted by the Appeal proposal. I note Mr

² <https://www.gov.uk/government/consultations/consistency-in-household-and-business-recycling-in-england/outcome/government-response> - see Appendix 8 to this rebuttal proof.

³ See The Environmental Permitting (England and Wales) (Amendment) Regulations 2023 https://www.legislation.gov.uk/ukdsi/2023/9780348249385/pdfs/ukdsi_9780348249385_en.pdf

Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

Roberts acknowledges this in his footnote 8, where he asserts that his Appendix NR10 sets out how Tolvik has tackled this, although reference to NR10 does not explain this precisely.

2. The wording "*does not exceed*" makes it clear that the value of 287kg per capita is more like a ceiling than a target. Like a speed limit, it is not something to be aimed for, rather it is something not to be exceeded.
3. Given this is a national target, and recycling rates are highly variable across waste collection/disposal authority areas in England, with generally speaking urban areas achieving lower rates than rural areas, for the national target to be achieved, higher rates will need to be met in areas where recycling may be more achievable to offset poorer performing authorities where conditions such as building stock and demographics act as a constraint on capture rates for separate collection. The variability of recycling rates between urban and rural areas is illustrated by the performance of BCP and Dorset for LACW which the Tolvik model shows to be 46.3% and 58.1% respectively in 2021/22.
4. The target is set against a baseline of 2019 residual waste production, and hence takes account of recycling performance already being achieved at that time. In the case of BCP and Dorset LACW, this was 52.4% and 56.2% in 2019/20.

2.21 I note that Mr Roberts accepts at Para 3.4.38 (e) of his Proof that achieving the residual waste reduction target would represent a municipal recycling rate of around 75%, replicating this from the Council's Statement of Case. In view of the above, the 75% ought to be seen as an across-the-board value, that may need to be exceeded in some areas, to offset performance in those areas where raising recycling rates is more problematic. In that regard it is notable that both Dorset and BCP are achieving recycling rates for LACW that exceed those set out in Mr Roberts' Table 3.1, with Dorset figuring in the top 10 authorities in England (Appendix 5). So, the pessimistic picture Mr Roberts paints of likely achievement of recycling rates, simply does not apply to the Plan area to which this Appeal relates.

Recycling Targets

2.22 I note at Para 3.4.9 of his Proof Mr Roberts attempts to deflect criticism of provision of residual waste treatment capacity in the form of EfW, as being in competition with recycling. He asserts that "*The presence or otherwise of ERF capacity has no material bearing on recycling rates*", without referencing any source to evidence this claim. On the contrary, it is because of this issue that the Welsh Government has introduced a moratorium on consenting further EfW capacity in Wales (see Appendix 6 of this rebuttal proof), and it is also why the recent review of incineration undertaken for the Scottish Government recommended no further capacity should be permitted (CD 12.74 see Appendix 9 of this rebuttal proof for recommendations).

2.23 The availability of ready outlets for residual waste in the form of EfW capacity and RDF export capacity is also a factor contributing to the poor recycling rates being achieved by certain authorities across England, which drags the national recycling rates down (as Mr Roberts cites in Table 3.1). Provision of additional EfW capacity that will remain operational for the next 40 years can only be expected to make achieving higher levels of recycling even more challenging. This is why the modelling study underpinning the NIC's recent assessment referenced in Appendix 1 of my main proof (CD12.44) also took the view that EfW capacity in England should be assumed to fall given the 2042 residual waste reduction target (and by inference for recycling rates to increase to the necessary level). So contrary to Mr Roberts' assertion that increases in recycling rates will require some magic ("magically increase"), constraining the supply of additional EfW capacity will give certainty so the much needed investment to ensure waste is managed further up the waste hierarchy is actually made. We are in agreement that the existence of a recycling target does not in itself cause it to be met, it requires decisions to be made that look to the long term.

2.24 Combining the 75% recycling rate, that would be a principal route to meeting the 2042 residual waste target, along with waste prevention measures, with the recycling targets set in the Circular Economy Package⁴ gives the following minimum recycling profile for municipal waste in England as a whole:

- by 2025, a minimum of 55% by weight
- by 2030, a minimum of 60% by weight
- by 2035 a minimum of 65% by weight (and no more than 10% landfill)
- by 2042 a minimum of 75% by weight.

It is important to remember that these targets are national ones, and there are areas such as cities where high recycling rates are more problematic to achieve than in rural areas, and therefore the 'targets' should be regarded as a 'floor' or a 'ceiling'.

⁴ Transposed into English law via Regulation 11 of *The Waste (Circular Economy) (Amendment) Regulations 2020* (SI 2020 No.904) <https://www.legislation.gov.uk/ukSI/2020/904/made>

Rebuttal Proof of Mr Alan Potter BSc (Hons), FCIWM, CEnv, UKELA

That is to say that for, no less than 65% to be recycled by 2035 some Council areas will have to exceed these levels.

2.25 Following Mr Roberts' assertion municipal waste is taken to be the focus of the exercise to determine the quantity of suitable waste that may be available for incineration into the future for the next 40 years arising principally from the Plan area. Municipal waste is composed of LACW plus the proportion of waste arising from businesses that is similar in nature and composition to household waste. National analysis of waste composition studies indicates that a significant proportion of waste generated by businesses that is not collected by Local Authorities falls within this definition. The most recent estimates for England as a whole, found that around 43% of the total C&I waste stream may be waste of a type that falls under the definition of municipal⁵ and this may amount to 60% of the commercial waste stream.

Constructing Municipal Waste Arising Scenarios: Scenario A (growth)

2.26 In order to test the 'top down' municipal waste driven assessment it is first necessary to disaggregate the portion of the C&I waste estimate to which the municipal targets will apply. Following this I have then applied the above recycling rates to that proportion of the C&I waste stream plus LACW (assuming that Plan Area LACW will be available to the Appeal proposal). Taking the C&I waste arising value presented by Tolvik as the baseline for this analysis we start with 258,375 tonnes in 2021 (see Paragraph 2.13 above). In paragraph A1.5 of my main proof I set out the split between commercial and industrial component of this waste stream derived from the Defra commissioned Commercial and Industrial Waste Survey 2009⁶. This identified 70% of the C&I stream being commercial. Therefore this gives a value of 180,863 tonnes (70% of 258,375). If we then take 60% of this value as being municipal, this gives a starting value of 108,518 tonnes. When added to the tonnage of LACW in 2021/22 of 397,859 tonnes, this gives the tonnage municipal waste arising in the Plan area of 506,377 tonnes in 2022. This additional step of course ignores the reality that the Appeal plant is unlikely to cater for Plan area LACW all the while it is otherwise contracted.

- I have then applied the growth rates cited in Para A1.4 of my main Proof to the tonnage from each component i.e. commercial waste at 0.48% per annum and LACW at 0.35% per annum.
- I have then applied the recycling rates for municipal waste to the combined values applying annual increments to get to each of the statutory floor years.

The results for the first 25 years of the life of the plant were it to be consented are shown in Table 5 below:

⁵ National Municipal Waste Composition, England 2017 WRAP January 2020 (Eunomia)

⁶ Commercial and Industrial Waste Survey 2009 Final Report (DEFRA., December 2010) (CD 12.37)

Rebuttal Proof of Mr Alan Potter BSc (Hons), FCIWM, CEnv, UKELA

Table 5: Residual Municipal Waste Arising from Dorset & BCP - Scenario A (tonnes)
Amber row indicates recycling floor target year

	Tonnes Commercial	Tonnes LACW	Tonnes of Municipal Waste	Recycling Floor (%)	Min Tonnes Recycled Municipal	Max Residual Municipal
Growth Rate	0.48%	0.35%				
2022	108,518	397,859	506,377	52.0%	263,316	243,061
2023	109,039	399,252	508,290	53.0%	269,394	238,896
2024	109,562	400,649	510,211	54.0%	275,514	234,697
2025	110,088	402,051	512,139	55.0%	281,677	230,463
2026	110,617	403,458	514,075	56.0%	287,882	226,193
2027	111,148	404,870	516,018	57.0%	294,130	221,888
2028	111,681	406,287	517,969	58.0%	300,422	217,547
2029	112,217	407,709	519,927	59.0%	306,757	213,170
2030	112,756	409,136	521,892	60.0%	313,135	208,757
2031	113,297	410,568	523,865	61.0%	319,558	204,308
2032	113,841	412,005	525,846	62.0%	326,025	199,822
2033	114,387	413,447	527,835	63.0%	332,536	195,299
2034	114,936	414,895	529,831	64.0%	339,092	190,739
2035	115,488	416,347	531,835	65.0%	345,693	186,142
2036	116,042	417,804	533,846	66.4%	354,626	179,220
2037	116,599	419,266	535,866	67.9%	363,623	172,242
2038	117,159	420,734	537,893	69.3%	372,683	165,210
2039	117,721	422,206	539,928	70.7%	381,806	158,122
2040	118,286	423,684	541,970	72.1%	390,993	150,977
2041	118,854	425,167	544,021	73.6%	400,244	143,777
2042	119,425	426,655	546,080	75.0%	409,560	136,520
2043	119,998	428,148	548,146	75.0%	411,110	137,037
2044	120,574	429,647	550,221	75.0%	412,666	137,555
2045	121,153	431,150	552,303	75.0%	414,227	138,076
2046	121,734	432,659	554,394	75.0%	415,795	138,598
2047	122,319	434,174	556,492	75.0%	417,369	139,123
2048	122,906	435,693	558,599	75.0%	418,949	139,650
2049	123,496	437,218	560,714	75.0%	420,535	140,178
2050	124,088	438,749	562,837	75.0%	422,128	140,709

2.27 Table 5 above shows that the Plan area residual waste requirement falls below the proposed capacity of the Appeal plant of 202,000 tpa between 2031 and 2032 (shown in red box), only 5 years into the plant's operation were it to be granted permission, after which it would be drawing in waste from outside the Plan area, assuming all the residual municipal waste is captured and suitable for incineration. The Plan area need for residual waste management declines to 136,500 tpa at 2042. This assumes that waste continues to grow at the same rate through to 2050 and of

Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

course includes LACW that is in fact otherwise contracted. If LACW were to be omitted the tonnage of municipal commercial waste would be between c49,500 tonnes in 2025 falling to c30,000 tonnes in 2042.

Constructing Municipal Waste Arising Scenarios: Scenario B (zero growth)

2.28 Accepting Mr Robert's assertion at Paragraph 3.4.8 of his Proof that:

As the overall quantities of waste that are generated typically do not significantly alter year on year, the quantum of residual waste produced is largely a product of how much of the total waste is recycled...

The results are displayed in Table 6 below:

Table 6: Residual Municipal Waste Arising from Dorset & BCP - Scenario B (tonnes)

Amber row indicates recycling floor target year

	Tonnes Commercial	Tonnes LACW	Tonnes of Municipal Waste	Recycling Floor (%)	Min Tonnes Recycled	Max Residual Municipal
2022	108,518	397,859	506,377	52.0%	263,316	243,061
2023	108,518	397,859	506,377	53.0%	268,380	237,997
2024	108,518	397,859	506,377	54.0%	273,444	232,933
2025	108,518	397,859	506,377	55.0%	278,507	227,870
2026	108,518	397,859	506,377	56.0%	283,571	222,806
2027	108,518	397,859	506,377	57.0%	288,635	217,742
2028	108,518	397,859	506,377	58.0%	293,699	212,678
2029	108,518	397,859	506,377	59.0%	298,762	207,615
2030	108,518	397,859	506,377	60.0%	303,826	202,551
2031	108,518	397,859	506,377	61.0%	308,890	197,487
2032	108,518	397,859	506,377	62.0%	313,954	192,423
2033	108,518	397,859	506,377	63.0%	319,018	187,359
2034	108,518	397,859	506,377	64.0%	324,081	182,296
2035	108,518	397,859	506,377	65.0%	329,145	177,232
2036	108,518	397,859	506,377	66.4%	336,379	169,998
2037	108,518	397,859	506,377	67.9%	343,613	162,764
2038	108,518	397,859	506,377	69.3%	350,847	155,530
2039	108,518	397,859	506,377	70.7%	358,081	148,296
2040	108,518	397,859	506,377	72.1%	365,315	141,062
2041	108,518	397,859	506,377	73.6%	372,549	133,828
2042	108,518	397,859	506,377	75.0%	379,783	126,594
2043	108,518	397,859	506,377	75.0%	379,783	126,594
2044	108,518	397,859	506,377	75.0%	379,783	126,594
2045	108,518	397,859	506,377	75.0%	379,783	126,594
2046	108,518	397,859	506,377	75.0%	379,783	126,594
2047	108,518	397,859	506,377	75.0%	379,783	126,594
2048	108,518	397,859	506,377	75.0%	379,783	126,594
2049	108,518	397,859	506,377	75.0%	379,783	126,594
2050	108,518	397,859	506,377	75.0%	379,783	126,594

Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

This shows that with no growth in arisings the capacity threshold is crossed at 2030, only 4 years into the proposed plant's operation were this Appeal to be upheld, after which it would be drawing in waste from outside the Plan area, assuming all the residual municipal waste is captured and all is suitable for incineration. The Plan area need declines to 127,000 tpa from 2042 onwards. This represents two thirds of the plant capacity and includes LACW that is currently otherwise contracted. If LACW were to be omitted, the tonnage of residual municipal waste would be between c49,000 tonnes in 2025 falling to c27,000 tonnes in 2042 (25% of 108,518 tonnes)

Bottom Up Analysis of Residual Waste Arising in Plan Area

2.29 In my main proof I presented an alternative method of generating a baseline value for residual waste. This applied the components set out in Table 3 of Appendix 1 of my main proof. I note that Mr Roberts actually proposes (at Para 6c. of his Appendix N8 to his Proof) that only the waste going to landfill, incineration and exported as RDF ought to be counted, omitting movements of Plan area waste to and from intermediate facilities within and outside the Plan area. Table 7 below reflects the findings in my main proof presented in Table 3 of Appendix 1 but applying Mr Roberts' position. This gives a value of between c.154,500 tonnes and c162,000 tonnes of residual waste arising in the Plan area that may be suitable for direct incineration.

Table 7: Residual waste arising in Plan area (Dorset subregion) 2021 & 2022 (amended in line with Roberts)

Source: WDI (values in 000s tonnes)

No	Component	2021	2022	Constituent Data Values
1	Subregion waste to Landfill in England	36.3	39.7	50% 191212 plus mixed municipal and biodegradable. No RDF reported
2	Subregion waste to EfW in England	32.4	67.4	RDF plus mixed municipal plus 191212
3	Exports outside England from subregion sites	85.8	54.8	Only RDF (191210) reported
	Total Residual Waste	154.5	161.9	

However the arisings of residual waste can be expected to fall as higher recycling rates are achieved as set out earlier in this rebuttal.

2.30 In response to Mr Roberts' criticism of my method presented in his Appendix NR8 I have looked at arisings data across the 5 year period and the values obtained are plotted in Figure 2. This clearly shows that the trend in arisings of residual waste from the Plan area is a declining one. Figure 2 shows the falling trend in arisings of residual waste from the Dorset subregion over the past 5 years. The average rate of reduction over the period is -1.39% per annum.

Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

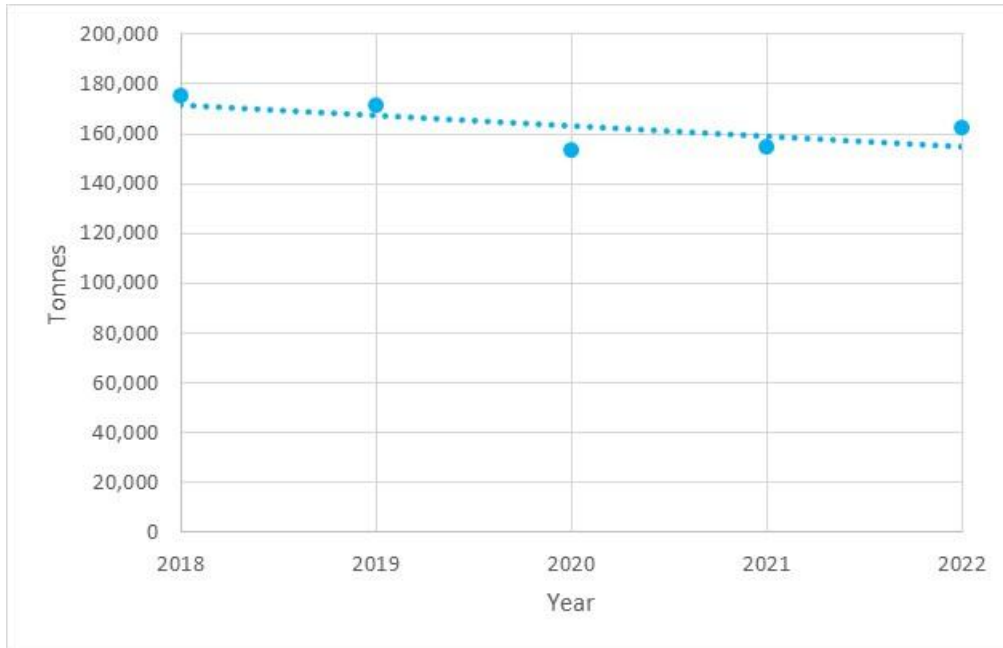


Figure 2: Total Residual Waste Arising from Dorset Sub Region 2018-2022 (Trendline blue dashed).

I have applied the mean growth rate of -1.39% per annum indicated over the past 5 years to the 2022 baseline value of c.162,000 tonnes revised in accordance with Mr Roberts' position and projected it forward for the first 25 years of the life of the Appeal plant (2026-2050), were it to be consented. The results are shown in Table 8 below.

Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

**Table 8: Residual Municipal Waste Arising from Dorset & BCP - Applying WDI 2022 baseline
(kilotonnes)**

	Residual Waste (kt)
Growth Rate	-1.39%
2022	161.9
2023	159.6
2024	157.4
2025	155.2
2026	153.1
2027	151.0
2028	148.9
2029	146.8
2030	144.7
2031	142.7
2032	140.8
2033	138.8
2034	136.9
2035	135.0
2036	133.1
2037	131.2
2038	129.4
2039	127.6
2040	125.8
2041	124.1
2042	122.4
2043	120.7
2044	119.0
2045	117.3
2046	115.7
2047	114.1
2048	112.5
2049	110.9
2050	109.4

Table 8 shows that residual waste arisings that may be catered for by the Appeal proposal will always fall below the proposed peak capacity of the plant and could equate to just over 50% of the proposed capacity by 2050. That is only 25 years into a probable 40 year life. When projecting arisings to the end of the proposed plant projected life (2065) applying this approach I find that the Plan area residual waste arising may be around 89,000 tonnes. This represents less than 45% of the proposed Appeal plant capacity of 202,000tpa.

Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

2.31 Hence I conclude that, whichever of the two methods applied, 'top-down' or 'bottom-up', to forecast residual waste arisings from the Plan area will be significantly less than the capacity of the plant proposed at this Appeal at some point in the plant's life were the Appeal to be upheld. Bearing in mind that according to Mr Roberts the plant is intended to principally serve the Plan area, and the LACW produced within the Plan area is already contracted to mid to late 2020s, this reduces the available tonnage of residual waste to substantially less than the capacity proposed.

Table 9: Summary of Residual Waste Arisings in Dorset & BCP to 2050 (tonnes)

		2025	2030	2035	2040	2045	2050
A.1	Top down municipal with growth Scenario A inc LACW (Table 4)	230,463	208,757	186,142	150,977	138,076	140,709
A.2	Top down municipal with growth Scenario A exc LACW (Table 4)	49,540	45,102	40,421	32,951	30,288	31,022
B.1	Top down municipal without growth (Scenario B) inc LACW (Table 5)	227,870	202,551	177,232	141,062	126,594	126,594
B.2	Top down municipal without growth (Scenario B) exc LACW (Table 5)	48,833	43,407	37,981	30,230	27,130	27,130
C	Bottom up residual (Table 8)	155,200	144,700	135,000	125,800	117,300	109,400

The above values all assume that 100% of residual waste identified is suitable for incineration, and all of it will be channelled to the Appeal plant. The above Table only covers the first 25 years of the plant's operation were the Appeal to be upheld, and arisings can be expected to fall further for the remaining 15 years of the plant's operational life.

Capacity

2.32 Having established the quantity of residual waste likely to require management at different milestones in the future, it is also necessary to assess the availability of capacity within the vicinity of the Plan area that might meet such a need, bearing in mind that it is not necessarily the most economically efficient option for every Plan area to build its own EfW plant as recognised in Government Planning Practice Guidance cited at Paragraph 3.10 of my main proof.

2.33 In terms of capacity I offer the following observations:

Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

2.33.1 The values in Table 9 are all before Mr Roberts' MBT mass reduction of 34,444 tpa which should be deducted except for the 'bottom up' residual Scenario C which is measured post MBT.

2.33.2 If capacity at the recently consented EfW plant at Parley (one of the DWP allocated sites) of c60,000tpa is counted then the capacity shortfall in each of the years falls by 60,000 tonnes. This would eliminate any need under the commercial municipal only scenarios, and would significantly reduce the capacity need under the other scenarios.

2.33.3 The recently commissioned EfW plant at Bridgwater that is already accommodating the RDF residues from the Canford Magna MBT plant offers up to 109,000 tpa of merchant capacity. With Parley this could accommodate the remaining Plan area arisings under all but the most wide ranging Scenarios (A.1 & B.1) from 2025. For these two scenarios from 2040 (i.e. 15 years into the projected Appeal plant's life) the residual waste management need of the Plan area would be adequately provided for, and there would be no need for an additional plant of the capacity proposed after that date.

Response to Mr Roberts' criticisms of my method to generate residual waste arisings baseline presented in the Council's Outline Statement of Waste Need

2.34 Mr Roberts' Appendix NR8 includes a critique of Table 1 of the Council's Outline Statement of Waste Need. This section of my rebuttal considers and responds to each of the specific points raised. The original Table is reproduced below to aid the reader.

Table 1: Residual waste arising in Dorset subregion 2021 & 2022.
Source: WDI (values in 000s tonnes).

No	Component	2021	2022	Constituent Data Values
1	Subregion waste to Landfill in England	36.3	39.7	50% 191212 plus mixed municipal and biodegradable. No RDF reported
2	Subregion waste to EfW in England	32.4	67.4	RDF plus mixed municipal plus 191212
3	Exports outside England from subregion sites	85.8	54.8	Only RDF (191210) reported
4	Transfers of subregion waste to transfer/treatment sites outside subregion	46.5	24.4	Transfer/Treatment only as others may involve non residual mixed municipal i.e., commingled recyclates.
5	Waste from outside subregion to subregion transfer/treatment sites	-22.5	-2.2	191212 plus mixed municipal and biodegradable.
	Total Residual Waste	178.5	184.1	

Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

Mr Roberts' Assertion in Para 6 of Appendix NR8	Council Response	Conclusion
<p>a. The original assessment of residual waste is based on two single year sets of WDI data looking at the WPA area only.</p>	<p>We have now looked at data for 5 years and this is included in Appendix 1 to this Rebuttal. Given Mr Roberts has stated the primary purpose of the plant would be to deal with Plan area waste, the limitation of the table to the WPA area only is considered to be justified. It should be noted that the residual waste management needs of other WPA across the south west were assessed in a subsequent table. (Table 6 Appendix 1)</p>	<p>The data shows a clear trend in falling arisings of residual waste over the past 5 years.</p>
<p>b. It is based solely on 4 EWC codes (LOW codes) as opposed to the aforementioned 74 codes for which waste went to English ERFs in 2022. Whilst many of these codes only gave rise to very small tonnages, the point is the market is bigger than inferred – of which bulky waste 20 03 07 is an obvious omission</p>	<p>The appellant has only applied for mixed municipal waste and RDF, hence these are the principal streams modelled. Is it now proposing the appeal ERF would also accept bulky waste? If so, it would need to be processed prior to burning and there is no proposal within the application subject to this Appeal to do so.</p>	<p>As set out in Appendix 1 Paragraph A1.16-A1.17 of my main proof I consider that the four codes selected account for the waste that might be sourced to feed the plant. As Tolvik has not provided an alternative listing of waste by EWC codes, it is not possible to interrogate their model.</p>
<p>c. The comment in 1.4 (1.) that the: “... waste description 'mixed municipal waste' covers both black bag waste destined for disposal/recovery i.e., residual waste and commingled recyclates going for recycling via a Material Recycling Facility” is wholly irrelevant as Tolvik is only considering tonnages which end up going to ERF and landfill. Thus it is unclear what point is being made or what adjustments have been undertaken.</p>	<p>This comment is intended to make clear that commingled recyclates coded as mixed municipal waste managed at transfer stations should not be confused with black bag waste coded under the same code (EWC 20 03 01).</p>	<p>If we were to follow Mr Roberts' advice and focus only on the residual waste going to ERF, landfill and exported as RDF the values will be lower still. Taking these values alone from Table 1 reproduced above gives the following values for 2022: $39.7\text{kt} + 67.4\text{kt} + 54.8\text{kt} = 161.9\text{kt}$</p> <p>Even if the Tolvik regional adjustment shown in Table 3.2 of Mr Roberts' proof of 6.2kt is added this gives a total of 168.1 kt which is less than that in the bottom up assessment in my main proof.</p>

Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

<p>d. With regard to 19 12 12 Tolvik counts 100% of that EWC code sent to ERFs, but only 70% of that EWC code sent to landfill. It is estimated that 70% of the landfill input of 19 12 12 is combustible based on detailed published work undertaken by Tolvik on behalf of the Environmental Services Association “UK Residual Waste 2030 Market Review”. The Council (undoubtedly Mr Potter) assumes that only 50% of 19 12 12 is combustible. I assume, as stated, that the percentage reduction has only been applied to the landfilled figure.</p>	<p>Having reviewed the ESA report cited by Mr Roberts I cannot find any evidence in it to justify the 70% value used. Also notably that report was based on data for 2016 which is some 7 years old.</p>	<p>The analysis presented as Appendix 3 to my main Proof, is based on more recent data from 2021 reflecting current practice particularly with respect to trommel fines with low loss on ignition making them suitable for landfilling as inactive waste under the landfill tax regime (which explains why they continue to be landfilled). I still consider taking 50% of 19 12 12 landfilled remains the correct approach.</p>
<p>e. The Council’s figure for RDF export is not adjusted for WDI underreporting.</p>	<p>No evidence is presented to substantiate a claim that under reporting of RDF going for export is significant in the context of the Dorset sub-region in particular.</p> <p>I have sought to reconcile the residual waste outputs of the permitted waste facilities in the Dorset sub-region reported as going for incineration in the WDI 2022 with the reported inputs of Dorset residual waste to incineration/ EfW plants in the WDI 2022 as shown in Appendix 2 of this rebuttal. This shows that more is reported as going into incineration plants, than is reported as leaving waste sites. That is to say there are no missing thousands of tonnes of output. This exercise also confirmed that the only site within the Plan area that reported producing RDF going for export in 2022 was the Canford Magna MBT plant which has been counted.</p>	<p>Careful examination of the data supports the approach to taking the WDI output data as being correct, with no indication of RDF produced in the Dorset sub-region being 'lost' for which an adjustment needs to be made. (see Appendix 2)</p> <p>Making an adjustment based purely on a speculative assumption of under-reporting is not a robust approach to assessment.</p>
<p>f. There is no evidence that regard has been given to the waste arising within the South West</p>	<p>We have now looked at data for waste not coded down to the sub region level and have found that</p>	<p>There is no basis to justify the addition of non coded waste in the manner proposed, and Mr</p>

Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

<p>Region which is not coded to a specific WPA (it cannot be determined from Table 1).</p>	<p>there is very little unaccounted waste of the codes that may be suitable for incineration, and, in any event, that tonnage needs to be apportioned between the 14 WPAs within the South West region. See Appendix 3 to this Rebuttal. Furthermore we note that in any event the proposed adjustment presented in Mr Robert's Table 3.2 is only 6,222 tonnes which is not a significant amount.</p>	<p>Roberts offers no method by which the tonnage has been apportioned to arrive at his proposed value, so accepting the value would be on faith in Tolvik alone which in itself is not a robust basis to test evidence. In contrast, the Council has been transparent throughout in how its data has been compiled and analysed, and our method is disclosed so that it may be replicated.</p>
<p>g. No account has been taken of the mass loss at Canford. Tolvik's position is that if an ERF is built, it can out compete an MBT plant.</p>	<p>The mass loss arising from the Canford MBT plant was omitted in my main proof method on the basis that it is expected to continue to produce RDF, which is already counted in the bottom up residual arising value. I have taken Mr Roberts' mass loss assessment in the 'top-down' assessment contained in this rebuttal proof.</p>	<p>Unsubstantiated speculation on what might happen in the waste catchment is not a valid basis to forecast. Given the MBT plant is consented and operational, the capacity it offers should be considered to be in place as part of any capacity assessment, albeit at a reduced capacity contribution.</p>

2.35 I conclude from the above that the approach I took in my main proof is robust and that using the 'bottom-up' approach a starting value for residual waste arisings that may be suitable for incineration for the Plan area in 2022 is between the 168.1kt value, taking the elements proposed by Mr Roberts in his proof, and adding in an element for regional waste proposed by Tolvik, through to 184.2 kt arrived at through the calculation presented in Appendix 1 of my main proof.

Appendix 1: 5 year WDI data review

Mr Roberts cites at para 4b of Appendix NR8 to his proof the following statement by Tolvik:

"...Our point being that for any one year the WDI derived figures jump around from our modelled estimates and so we do not get overly concerned about the sort of difference we see for this small area for one year".

In response to this we have looked at the WDI data over the past 5 year period. This is set out in Table 1 below. This shows both the falling trend in the total amount of residual waste arising in the Dorset subregion, and the changing management profile over time.

The profile and trend are illustrated in Figures 1 and 2 respectively.

Table 1: Total Residual Waste Arising from Dorset Sub Region by Component

No	Component	2018	2019	2020	2021	2022	Constituent Data Values
1	Subregion waste to Landfill in England	60,278	50,339	35,960	36,355	39,763	50% 191212 plus mixed municipal and biodegradable. No RDF reported
2	Subregion waste to EfW in England	36,781	38,039	34,732	32,381	67,441	RDF plus mixed municipal plus 100% 191212
3	Exports outside England from subregion sites	77,926	83,158	82,913	85,767	54,826	Only RDF.
4	Transfers of subregion waste to transfer/treatment sites outside subregion	40,648	42,732	56,567	46,481	24,404	Transfer/Treatment only as others may involve non residual mixed municipal i.e. commingled recyclates.
5	Waste from outside subregion to subregion transfer/treatment sites	-3,572	-16,042	-7,614	-22,463	-2,180	191212 plus mixed municipal and biodegradable.
	Total Residual Waste	212,062	198,226	202,557	178,521	184,254	
	Growth rate		-6.52%	+2.19%	-11.87%	+3.21%	
	5 yr mean growth rate		-2.6% p.a				

Appendix 2: Dorset Sub-region Output reconciliation

The 'Waste Removed' dataset from the WDI 2022 was interrogated to find out how much waste identified as residual was reported as having gone to incineration, and to which regions it was managed.

These were then compared with 'Waste Received' dataset for residual waste from the Plan area received at incinerators reporting through the WDI.

The result is shown in the table below, where there is a reasonably close fit between reported values. In the absence of a shortfall in outputs appearing as inputs there does not appear to be any 'missing ' tonnages' for which an adjustment to the residual waste values obtained needs to be made.

Outputs of residual waste from Dorset/BCP sites reported as going to incineration	Inputs of residual waste going to EfW reported as coming from Dorset/BCP	Shortfall (if any)
62,707	67,368	0 (input greater than output)

Appendix 3: Sensitivity for Uncoded Waste

1. Accounting for uncoded Waste

The screenshot shows the '2022 Waste Returns - Waste Received Interrogator' interface. The 'Total Waste Received (tonnes)' is displayed as 46,589, highlighted in a green box. The interface includes several filter panels: 'Site Location' (Facility RPA, Facility Sub Region, Facility WPA, Facility District), 'Waste Types' (Basic W, EWC Chapter, Waste C), and 'Facility Type' (Site Category, Facility Type). The 'Origin Region' and 'Origin WPA' filters are also visible. A 'View Data' button and a 'Clear all slicers' button are present at the bottom right.

Screenshot 1 shows non Codeable waste accounts for 46,589 tonnes reported in the WDI in total. (value in green box)

The screenshot shows the '2022 Waste Returns - Waste Received Interrogator' interface. The 'Total Waste Received (tonnes)' is displayed as 31,202, highlighted in a green box. The interface includes several filter panels: 'Site Location' (Facility RPA, Facility Sub Region, Facility WPA, Facility District), 'Waste Types' (Basic W, EWC Chapter, Waste C), and 'Facility Type' (Site Category, Facility Type). The 'Origin Region' and 'Origin WPA' filters are also visible. A 'View Data' button and a 'Clear all slicers' button are present at the bottom right.

Screenshot 2 shows only 31,202t is of the type that might be suitable for incineration. Note the WDI screen does not allow display of the 4 codes selected for this purpose as it is presented as a 'drop-down' list.

Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

The data behind the 31,202t value shown in Screenshot 2 was downloaded for detailed interrogation. The data is displayed in the Table below

WPA	Site	Non Codeable Tonnes Received
Birmingham City	Alma Crescent Facility	23
Bournemouth, Christchurch and Poole	Canford MBT Facility	16,747
Hampshire	Blue Haze Landfill -	256
Kent	Chart Leacon Transfer Station & Household Waste Site	4,978
Sheffield	Tinsley Park Road Secure Storage Facility	7
Somerset	Dimmer Recovery Facility	605
	Dulverton Household Waste Recycling Centre	36
	Minehead Household Waste Recycling Centre	150
	Poole H W R C	252
	Walpole Waste Transfer Station	8,066
	Williton Household Waste Recycling Centre	83
	Grand Total	31,202

This shows that 16,747 tonnes of the combustible non coded waste actually went to the Canford MBT plant. However given that the output of this plant has been counted in the 'bottom-up' calculation - going to other locations as RDF - after it has undergone mass reduction, its omission does not actually affect the residual waste arising value generated through this method. As the other sites to which uncoded waste are some distance beyond the Plan area, it has been assumed that inputs to these sites did not arise within Dorset or BCP.

Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

2. Accounting for HIC Waste not Coded below South West

Step 1: Display all waste not coded below SW

2022 Waste Returns - Waste Received Interrogator

© Environment Agency 2023

Site Location

- Facility RPA: East Midlands, East of England, London, North West, South East, South West, West Midlands, Yorks & Humber
- Facility Sub Region: Bath, Bristol and S Glo, Berkshire, Buckinghamshire, Cambridgeshire, Cornwall, Derbyshire, Devon, Dorset, Former Humberside
- Facility WPA: Bristol City, Buckinghamshire, Cambridgeshire, Cornwall, Coventry, Derbyshire, Devon, Dorset, Dudley
- Facility District: Amber Valley, Arun, Bassetlaw, Bristol, City of, Buckinghamshire, Cornwall, Coventry, Dorset, Dudley

Waste Origin

- Origin Region: South West
- Origin WPA: Isles of Scilly, North Somerset, Plymouth, Somerset, South Gloucestershire, South West (WPA Not codea...), Swindon, Torbay, Wiltshire

Waste Types

- Basic W...: Hazardous, Hhold/Ind/Com, Inert/C+D
- EWC Chapter: 02 - AGRICULTURE AND FOOD PROCESSING..., 08 - PAINTS, ADHESIVES, SEALANTS AND INK..., 10 - THERMAL PROCESSES WASTE, 11 - CHEMICAL SURFACE TREATMENT AND C..., 12 - SHAPING AND PHYSICAL TREATMENT OF..., 15 - WASTE PACKAGING; ABSORBENTS, WIP..., 16 - WASTES NOT OTHERWISE SPECIFIED IN..., 18 - HUMAN AND ANIMAL HEALTH CARE WA..., 19 - WASTE ABND WATER TREATMENT WAS..., 20 - MUNICIPAL WASTES
- Waste C...: 02 01 10, 02 02 02, 02 02 04, 02 03 01, 02 03 04, 02 06 01, 02 07 04, 08 01 14, 08 01 18, 10 07 99

Facility Type

- Site Category: Burial, Incineration, Landfill, MRS, On/In Land, Processing, Storage, Transfer, Treatment
- Facility Type: Biological Treatment, CA Site, Car Breaker, Clinical Waste Incinerator, Clinical Waste Transfer, Clinical Waste Transfer / Treatment, Co-Incinerator (Haz), Composting, Deposit of waste to land (recovery), Haz Waste Transfer

Total Waste Received (tonnes): 649,561

View Data, Clear all slicers

Narrow down the data you wish to view by relevant option from the slicers. Hold Ctrl to items in a slicer.
Press 'View Data' to see the raw data behind. The data will appear in a new worksheet. You delete these additional worksheets if the file large.
Use the 'Clear all slicers' button to reset the table to show all data.

Screenshot 1 shows waste reported as South West (WPA Not codeable) = 649,561 tonnes

Replication of this for 2020 and 2021 gives the following results:

2020 632,127t; and

2021 743,178t

Step 2: Screen down to 4 target waste codes:

19 12 10 -RDF

19 12 12 - Processing Residues

20 02 01 Biodegradeable

20 03 01 Mixed municipal

2022 Waste Returns - Waste Received Interrogator

© Environment Agency 2023

Site Location

- Facility RPA: North West, South East, South West, West Midlands
- Facility Sub Region: Bath, Bristol and S Glo, Berkshire, Buckinghamshire, Cornwall, Devon, Dorset, Gloucestershire, Greater Manchester, Somerset
- Facility WPA: Bristol City, Buckinghamshire, Cornwall, Dorset, Dudley, Gloucestershire, Plymouth, Salford, Slough
- Facility District: Bristol, City of, Buckinghamshire, Cornwall, Dorset, Dudley, Plymouth, Salford, Slough, South Gloucestershire

Waste Origin

- Origin Region: South West
- Origin WPA: Gloucestershire, Isles of Scilly, North Somerset, Plymouth, Somerset, South Gloucestershire, South West (WPA Not codea...), Swindon, Torbay

Waste Types

- Basic W...: Hhold/Ind/Com
- EWC Chapter: 19 - WASTE ABND WATER TREATMENT WAS..., 20 - MUNICIPAL WASTES
- Waste C...: 19 10 01, 19 10 02, 19 12 02, 19 12 03, 19 12 04, 19 12 07, 19 12 12, 19 13 02, 20 01 01, 20 01 02

Facility Type

- Site Category: Incineration, Landfill, MRS, On/In Land, Transfer, Treatment
- Facility Type: Co-Incinerator (Haz), Deposit of waste to land (recovery), Haz Waste Transfer, Material Recycling Facility, Metal Recycling, Municipal Waste Incinerator, Non Haz (SNRHW) LF, Non-Haz Waste Transfer

Total Waste Received (tonnes): 68,215

View Data, Clear all slicers

Narrow down the data you wish to view by relevant option from the slicers. Hold Ctrl to items in a slicer.
Press 'View Data' to see the raw data behind. The data will appear in a new worksheet. You delete these additional worksheets if the file large.
Use the 'Clear all slicers' button to reset the table to show all data.

Screenshot 2 shows tonnage reduced to 68,215t NB: no entry for RDF (191210)

Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

Step 3: Screen down to landfill and incineration (exc co-incineration(haz))

2022 Waste Returns - Waste Received Interrogator

© Environment Agency 2023

Site Location

- Facility RPA: South East, South West
- Facility Sub Region: Berkshire, Buckinghamshire, Gloucestershire
- Facility WPA: Buckinghamshire, Gloucestershire, Slough
- Facility District: Buckinghamshire, Slough, Tewkesbury

Waste Origin

- Origin Region: South West
- Origin WPA: Gloucestershire, North Somerset, Plymouth, Somerset, South Gloucestershire, South West (WPA Not codea...), Swindon, Torbay, Wiltshire

Waste Types

- Basic W...: Hhold/Ind/Com
- EWC Chapter: 19 - WASTE ABND WATER TREATMENT WAS..., 20 - MUNICIPAL WASTES
- Waste C...: 19 12 12, 20 03 01

Facility Type

- Site Category: Incineration, Landfill
- Facility Type: Co-Incinerator (Haz), Municipal Waste Incinerator, Non Haz (SNRHW) LF

Total Waste Received (tonnes)
34,277

View Data
Clear all slicers

Narrow down the data you wish to view by selecting relevant option from the slicers. Hold Ctrl to select multiple items in a slicer.
Press 'View Data' to see the raw data behind the data. The data will appear in a new worksheet. You delete these additional worksheets if the file is large.
Use the 'Clear all slicers' button to reset the table to show all data.

Screenshot 3 shows tonnage reduced to 34,277t, only 19 12 12 and 20 03 01

Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

Step 4: View Data

Facility RPA	Facility Sub Region	Facility WPA	Site Name	Operator	Permit Type	EWC Waste Desc	Waste Code	Site Category	Facility Type	Origin WPA	Origin Region	Tonnes Received
South West	Gloucestershire	Gloucestershire	Wingmoor Quarry Landfill EPR/YP3439SM	GRUNDON	V L02 : Non Haz	(mixed municipal wa	20 03 01	Landfill	Non Haz (SNRH)	South West (WPA Not codea	South West	241
South West	Gloucestershire	Gloucestershire	Wingmoor Quarry Landfill EPR/YP3439SM	GRUNDON	V L02 : Non Haz	(mixed municipal wa	20 03 01	Landfill	Non Haz (SNRH)	South West (WPA Not codea	South West	236
South East	Berkshire	Slough	Lakeside EfW Facility EPR/BT7116IW	LAKESIDE EN B06 : Municipal	mixed municipal wa	20 03 01	Incineration	Municipal Wast	South West (WPA Not codea	South West	29,298	
South East	Buckinghamshire	Buckinghamshir	Greatmoor Waste Facility EPR/UP3734HT	FCC RECYCLI	B06 : Municipal other wastes (includ	19 12 12	Incineration	Municipal Wast	South West (WPA Not codea	South West	4,501	

Screenshot 4 shows data that totals 34,277t of SW region waste uncoded to WPA level going to 4 sites. This tonnage would need to be distributed across the 14 WPAs in SW region or allocated to the WPAs to which the particular receiving site is proximal.

Step 5: Analyse Data via Pivot Tables

Row Labels	Sum of Tonnes Received
South East	33,799
Buckinghamshire	4,501
Greatmoor Waste Facility EPR/UP3734HT	4,501
other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	4,501
Slough	29,298
Lakeside EfW Facility EPR/BT7116IW	29,298
mixed municipal waste	29,298
South West	478
Gloucestershire	478
Wingmoor Quarry Landfill EPR/YP3439SM	478
mixed municipal waste	478
Grand Total	34,277

Screenshot 5 shows that the majority of the waste not coded below SW level went to the Lakeside EfW facility, and the majority of this is known to have come from Wiltshire under the contract that the LACW contract holder Hills Waste Management. It is possible that the uncoded waste going to Greatmoor ERF may have come from Dorset, as a significant tonnage is reported as already having gone there in 2022 - 7,104 tonnes. But the very fact that a specific tonnage is reported as coming from Dorset suggests that the uncoded waste is more likely to arise from a different WPA in the South West to which inputs have not been attributed for some reason. **It is considered highly unlikely that any of the residual waste uncoded below SW regional level managed through incineration or landfill actually arose within the Dorset sub-region. Therefore there is no need to make an adjustment to the total residual waste arising value generated using the 'bottom-up' approach for this.**

Appendix 4: Testing Roberts' Assertion regarding reliability of WDI 2022

At para 3.4.20 of his Proof Roberts states that:

As an example, the WDI data waste tonnage for the sum of the UK regions falls short of that for the country as a whole i.e. there are errors (a short fall) in the waste data reported at regional level, which only gets captured when you interrogate total national waste.

Below is screenshot of the whole WDI 2022 showing a tonnage of 233,533,998t managed

2022 Waste Returns - Waste Received Interrogator © Environment Agency 2023

Site Location

- Facility RPA: East of Engla..., London, North East, North West, South East, South West, West Midlands, Yorks & Hum..., (blank)
- Facility Sub Region: Bath, Bristol and S Glo, Bedfordshire, Berkshire, Buckinghamshire, Cambridgeshire, Central London, Cheshire, Cornwall, County Durham
- Facility WPA: Barking and Dagenham, Barnet, Barnsley, Bath and North East So..., Bedford, Bexley, Birmingham City, Blackburn with Darwen, Blackpool
- Facility District: Adur, Allerdale, Amber Valley, Arun, Ashfield, Ashford, Babergh, Barking and Dagenh..., Barnet

Waste Origin

- Origin Region: East Midlands, East of England, London, North East, North West, Northern Ireland, Not Codeable, Outside UK, Scotland
- Origin WPA: Bexley, Birmingham City, Blackburn with Darwen, Blackpool, Bolton, Bournemouth, Christchurch ..., Bracknell Forest, Bradford City, Brent

Waste Types

- Basic W...: Hazardous, Hhold/Ind/Com, Inert/C+D
- EWC Chapter: 04 - LEATHER, FUR AND TEXTILEIndustr..., 05 - PETROLEUM, GAS AND COAL PROCES..., 06 - INORGANIC CHEMICAL PROCESS WA..., 07 - ORGANIC CHEMICAL PROCESS WASTE
- Waste C...: 01 01 01, 01 01 02, 01 03 06, 01 03 07*

Facility Type

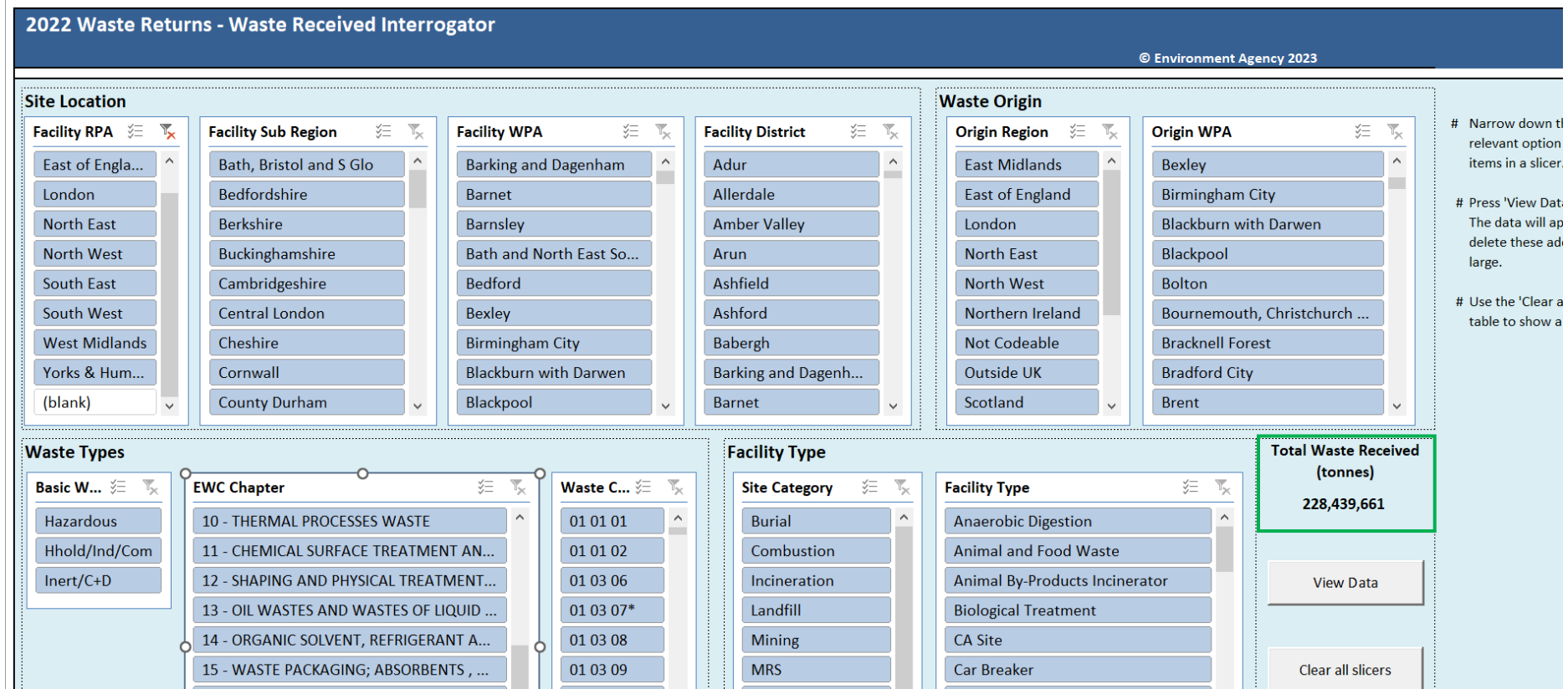
- Site Category: Burial, Combustion, Incineration, Landfill
- Facility Type: Anaerobic Digestion, Animal and Food Waste, Animal By-Products Incinerator, Biological Treatment

Total Waste Received (tonnes)
233,533,998

[View Data](#)

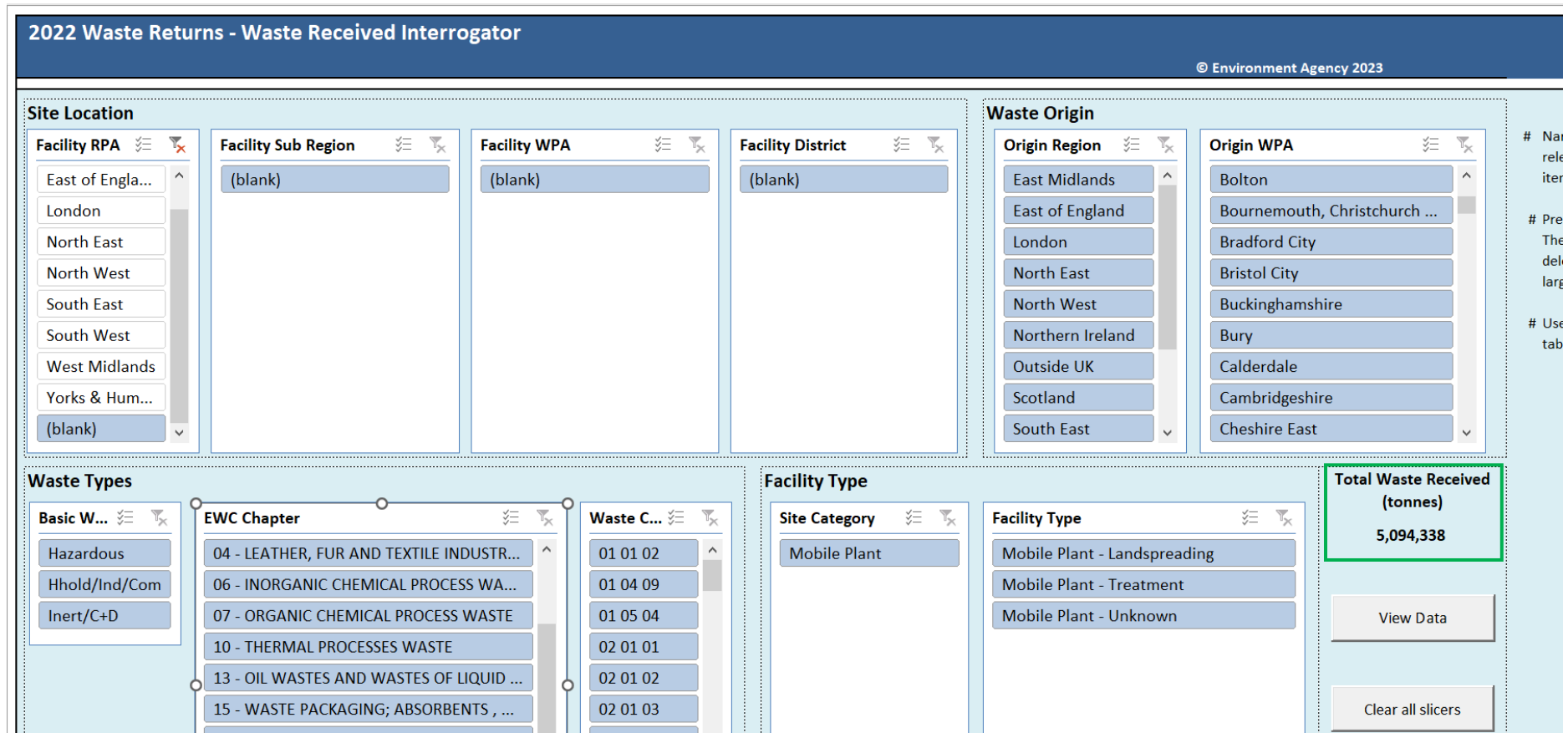
Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

Below is screenshot when the regions are selected showing a tonnage of 228,439,661t managed, so a difference of c5 million tonnes which represent a % error of 2.2%. This would not be regarded as significant.



Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

When one interrogates what the 5 million tonnes actually represents, it is waste managed via mobile plants which have no fixed location. Therefore the non attribution of this tonnage to any particular WPA area makes absolute sense.



Therefore my investigation of Mr Roberts' assertion on this point finds it is unsubstantiated, and hence his claim that the WDI dataset should not be relied upon are not robust.

Rebuttal Proof of Mr Alan Potter *BSc (Hons), FCIWM, CEnv, UKELA*

Appendix 5. Top 10 LACW recycling rates achieved by English WCA/WDA 2021-22

Table 2: Management of Local Authority Collected Waste, England, 2014-15 to 2021-22

Year	Region	Geographical Code	ONS Code	Jpp Order	Authority	Authority Type	Landfilled	Incineration with EFW	Incineration without EFW	Recycled-Compos ⁴	% recycled	Other ¹	Total ²	Input to intermediate plants ³
2021-22	South West	3520	E06000022	349	Bath and North East Somerset Council	Unitary	2,348	26,491	0	50,070	61.41%	2,624	81,533	7,485
2021-22	North West	300	E06000050	704	Cheshire West and Chester	Unitary	0	65,535	0	106,112	59.38%	7,054	178,702	81,859
2021-22	South East	3300	E10000025	327	Oxfordshire County Council	Disposal	11,785	116,136	0	187,313	58.35%	5,790	321,024	4,241
2021-22	South West	3745	E06000059	717	Dorset Council	Unitary	4,022	76,450	0	115,485	58.31%	2,111	198,068	76,600
2021-22	South East	2820	E06000036	277	Bracknell Forest Borough Council	Unitary	3,625	16,770	0	27,785	56.50%	998	49,177	1,088
2021-22	North West	290	E06000049	703	Cheshire East	Unitary	4,398	85,000	0	114,090	56.07%	0	203,489	5,878
2021-22	East Midlands	1100	E06000017	106	Rutland County Council	Unitary	0	9,963	0	11,842	55.74%	-561	21,245	168
2021-22	North West	460	E08000010	42	Wigan MBC	Unitary	4,064	63,137	0	80,828	54.78%	-490	147,538	62,742
2021-22	South East	2770	E06000041	272	Wokingham Council	Unitary	4,059	27,487	0	39,711	54.60%	1,471	72,727	1,572
2021-22	South West	3720	E10000008	368	Devon County Council	Disposal	16,684	160,045	180	209,199	53.62%	4,053	390,161	4,051

Appendix 6 - Welsh Government Press Release 24 March 2021



PRESS RELEASE

Wales takes action on Circular Economy with funding, upcoming reforms on plastic and a moratorium on large-scale waste energy

The Welsh Government is setting out a package of measures to deliver on commitments it set out in its **Beyond Recycling** strategy earlier this month.

First published: 24 March 2021

Last updated: 24 March 2021

This was published under the 2016 to 2021 administration of the Welsh Government

The actions form a key part of Wales' drive towards becoming a zero-waste, carbon

net-zero nation by 2050, or earlier.

These include increased funding to roll out of electric collection vehicles and circular economy projects across Wales, an immediate moratorium on new large scale energy from waste and upcoming game-changing reforms on plastic.

This month will also see electric vehicles being rolled out for recycling and waste collection services in Newport, Cardiff and Powys.

As well as being good for the environment, the vehicles generate lower running costs and less noise, with the Welsh Government allocating an extra £3m to expand the programme.

The Welsh Government is also building on the success of its support to innovative projects across Wales through its Circular Economy Fund – which is already –supporting 180 innovative projects in all parts of Wales.

The additional support being made available will bring the funding to more than £80m.

Last year, Wales achieved its highest ever recycling rate, at over 65% - and has set out ambitions to become the world leader. As a result the need to burn waste, or send it to landfill, will reduce and the Welsh Government is putting in place an immediate moratorium on new large scale energy from waste plants. The new moratorium will cover new energy from waste plants with capacity of 10MW or more, and will come into effect immediately.

The moratorium will also mean small-scale plants, of less than 10MW, will only be allowed if applicants can show there is a need for such facilities in the regions in which they are planned. Small plants would also need to supply heat, and – where possible – be carbon-capture and storage enabled, or ready.

Action is also being taken to tackle plastic pollution, with two upcoming consultations covering game-changing reforms for plastic packaging and a new Deposit Return Scheme for drinks containers.

These measures are being developed jointly with the other Governments within the UK and will see less waste generated, more items re-used and recycled, and less litter. They will also incentivise better design and an increase in the use of recycled materials in packaging.

Appendix 7 - DEFRA Written Answer 13th October 2022

Incinerators: 13 Oct 2022: Hansard Written Answers - TheyWorkForYou

<https://www.theyworkforyou.com/wrans/?id=2022-09-22.54691.1>

Incinerators

Department for Environment, Food and Rural Affairs written question – answered on 13th October 2022 (</wrans/?d=2022-10-13>).



Jane Hunt

Conservative, Loughborough

To ask the [Secretary of State](#) (</glossary/?gl=23>) for Environment, Food and Rural Affairs, if he will make it his policy to impose a moratorium on new build incinerators and withhold any increase in capacity requests to licences already in place until additional research on incinerator overcapacity has been concluded.

Tweet

(<https://twitter.com/share?url=https%3A%2F%2Fwww.theyworkforyou.com%2Fwrans%2F%3Fid%3D2022-09-22.54691.q0&text=Jane+Hunt+on+Department+for+Environment%2C+Food+and+Rural+Affairs%2C+at+TheyWorkForYou&related=theyworkforyou%2Cmysociety>)

Share

(https://www.facebook.com/dialog/share?app_id=734726803296567&display=popup&href=https%3A%2F%2Fwww.theyworkforyou.com%2Fwrans%2F%3Fid%3D2022-09-22.54691.q0"e=Jane+Hunt+on+Department+for+Environment%2C+Food+and+Rural+Affairs%2C+at+TheyWorkForYou)

Hansard source (<https://questions-statements.parliament.uk/written-questions/detail/2022-09-22/54691>) (Citation: HC Deb, 13 October 2022, cW)



Trudy Harrison

The Parliamentary Under-Secretary of State for Environment, Food and Rural Affairs

Defra has no plans to introduce a moratorium on new energy from waste (EfW) capacity in England. In the Resources and Waste Strategy we committed to monitoring residual waste treatment capacity and we intend to publish a fresh analysis over coming months. Local authorities are responsible for determining their waste treatment capacity needs at a local level via Waste Local Plans and need to factor national policy measures being implemented into their forward planning. **A proposed plant must not result in overcapacity of EfW waste treatment at a national or local level.**

Does this answer the above question?

0 people think so

1 person thinks not

Would you like to **ask a question like this yourself**? Use our [Freedom of Information site](#)

(<http://www.whatdotheyknow.com>).

Tweet

Appendix 8 - Extract of Government Response on Simpler Recycling 21 November 2023

of 21
overnment response - GOV.UK

Tuesday 28 November 2023, 12:51 pm2 of 21
<https://www.gov.uk/government/consultations/consistency-in-househo...> Government response - GOV.UK

Tuesday 28 November 2023, 12:51 pm
<https://www.gov.uk/government/consultations/consistency-in-househo...>

Executive summary

We want to make it easier for people to do the right thing, maximise use, minimise waste and drive up recycling rates.

We have seen household recycling rates in England increase from 11% in the 2000 to 2001 financial year to 42% in 2021 to 2022. However, in recent years household recycling rates have 'plateaued' at around 42% to 44%. To address this, we will repeal EU-derived waste collection requirements and introduce improved and simplified requirements through our Environment Act 2021.

Across England, people will be able to recycle the same materials, no longer needing to check what their council will accept for recycling.

We have listened to councils and householders who are concerned about the risk of too many bins cluttering our streets. The intention of the new regulations introduced by the Environment Act 2021 is to drive up our recycling rates across England. However, by only providing an exception to the requirement to separately collect recyclable waste streams where it can be proactively justified, as pointed out by some councils, this could risk unintended consequences where, if services were not properly thought through, householders could be forced to collect each waste stream in a separate bin – plastic, paper and card, glass, metal, food waste and garden waste, as well as residual (non-recyclable) waste.

This was not the intention of the policy, and we know that local authorities can attain high recycling rates with a co-mingled recycling service (collecting all dry recycling together). Having assessed the highest performing councils on recycling rates, we propose to introduce exemptions to allow all councils in England to offer just 3 waste containers (bins, boxes or bags) – for dry recycling, food waste and residual (non-recyclable) waste. An optional garden waste collection will be offered to all households, and councils can choose to co-collect food and garden waste if preferred. Simpler Recycling will ensure that local authorities retain the flexibility to collect the recyclable waste streams in the most appropriate way for their residents. Subject to consultation with relevant parties, the exemptions will be confirmed in regulations to ensure that no council will be required to provide 7 different bins.

Therefore, under the new requirements:

- all local authorities in England must collect the same recyclable waste streams for recycling or composting from households. The recyclable waste streams include paper and card, plastic, glass, metal, food waste, and garden waste
- all non-household municipal premises in England (such as businesses,

schools and hospitals), must make arrangements to have the same set of recyclable waste streams (with the exception of garden waste) collected for recycling or composting, and must present their waste in accordance with the arrangements

Furthermore, the government is committed to delivering comprehensive, frequent rubbish and recycling collections. Through statutory guidance, we propose requiring local authorities to collect residual (non-recyclable) waste at least fortnightly, if not more frequently, to protect local amenity and prevent unintended consequences of cutting residual waste collection frequency. The government actively encourages councils to collect residual waste more frequently than fortnightly – this minimum standard provides a backstop, not a recommendation. The combination of the backstop on residual collections, alongside the new weekly food waste collections, will ensure frequent collections of malodorous waste, and will stop the trend towards 3 or 4 weekly bin collections.

This proposal is subject to consultation with local authorities and will be confirmed in the statutory guidance.

The improved recycling system will support investment in domestic reprocessing facilities, creating UK jobs and increasing resource security. Additionally, these reforms will mean that people can recycle the same items at home, work or school throughout England. This will be supported by the introduction of mandatory recyclability labelling on packaging, a requirement that will be introduced as part of extended producer responsibility (EPR) for packaging. Together, these policies will make it much easier to know what can and cannot be recycled.

Municipal food waste collections will reduce the amount of food waste going to landfill, where it releases harmful greenhouse gases, helping to achieve our Net Zero strategy target to eliminate biodegradable waste sent to landfill from 2028. Instead, where food waste is collected separately, it can be reprocessed to create organic fertiliser and biogas, which can be used to generate electricity, bolstering our energy security.

The 2021 consultation on consistency in household and business recycling in England

The [consultation on Consistency in household and business recycling in England](https://www.gov.uk/government/consultations/consistency-in-household-and-business-recycling-in-england) (<https://www.gov.uk/government/consultations/consistency-in-household-and-business-recycling-in-england>) opened on 7 May 2021 and ran for 8 weeks, closing on 4 July 2021.

Appendix 9 - Extract of Independent Review of the role of Incineration
May 2022

Stop, Sort, Burn, Bury?
**Independent Review of the Role of
Incineration in the Waste Hierarchy in
Scotland**
Report

May 2022

Stop, Sort, Burn, Bury?

Independent Review of the Role of Incineration in the Waste Hierarchy in Scotland April 2022

Executive Summary

The Independent Review of the Role of Incineration in the Waste Hierarchy (the Review) commenced in November 2021, with this report being delivered in April 2022. The Review, chaired by Dr Colin Church, set out to answer five key questions:

1. Given Scotland's waste management ambitions and current progress towards these, what capacity is required to manage residual waste in Scotland?
2. What are the options for managing residual waste?
3. What are the economic, environmental and social trade-offs of those residual waste management options?
4. How do we decide where capacity should be located, and in what form?
5. What can be done to improve existing residual waste treatment facilities in terms of carbon performance and societal impacts?

The Review was asked by the Minister to prioritise the assessment of national capacity requirements (Topic 1). To respond to these topics, the review considered existing evidence and commissioned additional capacity modelling, an appraisal of waste treatment options and a rapid evidence review of the potential health impacts of incinerating waste. Additionally, the Review opened a Call for Evidence, allowing stakeholders to submit written and verbal evidence and considerations for the Review.

During its review of available evidence, it became apparent to the Review that the accessibility, quality and quantity of some data around waste management in Scotland is lacking in some key aspects. To address this, the Review recommends improvements to the Scottish Government's waste management data and for the Scottish Government, industry and local authorities to improve the transparency of their data (see Recommendation 2 and Recommendation 3).

Capacity to manage residual waste in Scotland

Overall, the capacity analysis completed for the Review suggests that there is likely to be a capacity gap in 2025, when the biodegradable municipal waste (BMW) ban comes into force. This will clearly be exacerbated if the ban is extended to include all non-municipal biodegradable waste. While this capacity gap could be closed by Scotland achieving its waste and recycling targets, stakeholders raised concerns about the likelihood of achieving these targets, drawing on experience and comparisons with other nations as evidence of what could be possible. The Review recommends that Scotland should limit the granting of further planning permissions for incineration infrastructure (see Recommendation 4). Further to this, the Review recommends that an indicative cap for the residual waste treatment needed in Scotland should be developed, and that this should decline over time as Scotland transitions towards a fully circular economy (see Recommendation 5).

The short term nature of the capacity gap, balanced against the long term likelihood of overcapacity, highlighted the difficulty in using infrastructure with long operational lifespans alone to treat residual waste. The Review finds that the risk of lock-in in

3

**Foreword from Dr Colin Church, Chair of the
Independent Review**

I was honoured to be asked in November 2021 to lead the independent review into the role of incineration in the waste hierarchy in Scotland. How we address the challenges of moving from a linear economic model to a low-carbon, more circular economy is a passionate interest of mine, and the role of incineration in that move is one key challenge.



As Scotland seeks to make this move, the prominence of incineration has grown. The ban on landfilling biodegradable municipal waste from 2025 has concentrated many minds, and incineration is rightly a fundamental element of the approach to meet it. At the same time, concerns have been raised about the impacts of incineration on human health and the environment. Modern plants are far from the polluting monstrosities of the past, now being required to meet stringent emissions standards to protect human health and the environment from airborne harm. But burning waste also produces carbon dioxide, a greenhouse gas, so allowing it to be freely emitted in the long term is incompatible with Scotland's desire to reach net zero carbon emissions. There are also concerns as to whether a high level of incineration can act as a constraint on greater waste prevention and recycling.

At the same time, the resource and waste management system is complex and interdependent. It is impossible to consider one aspect of it (such as incineration) properly in isolation from the others (waste prevention, recycling, etc). I must admit to having been more than a little daunted to be asked to do so in a little over four months! It has indeed been a difficult challenge, especially in the light of the lack of data in some crucial areas and whilst other parts of the system are also in motion. However, the Report before you now is as good as it could be in the circumstances, and I believe it offers some clear messages to the Scottish Government and all stakeholders on the current and future role of incineration in the waste hierarchy in Scotland.

I am immensely grateful to all the individuals and organisations who provided input to the Review via submissions to the Call for Evidence and through online and in person meetings. Their insights and evidence, and their willingness to share them with me, enabled this Review to deliver its report within the timescales laid down by the Minister.

Finally, my thanks to the team who supported me so ably in this task and without whom this report would not exist.

Dr Colin Church CEnv FIMM CRWM MCIWM
Independent Chair of the Review

Stop, Sort, Burn, Bury?

Independent Review of the Role of Incineration in the Waste Hierarchy in Scotland April 2022

waste management contracts is genuine, and recommends that local authorities specifically address this within their contracts (see Recommendation 6).

Residual Waste Management Options

The best form of residual waste treatment is preventing it occurring in the first place, through reducing waste and recycling. The Review recommends that the Scottish Government does more to reduce the proportion of recyclable materials in the residual waste stream (see Recommendation 1).

In terms of managing the remaining residual waste, the Review assessed the feasibility of a number of residual waste treatment options. In consideration of this assessment, along with a further appraisal of social, health and climate considerations relating to waste treatment, the Review finds that incineration's current place within the waste hierarchy, where overall it is preferable to other forms of residual waste treatment, but less desirable than reducing and recycling waste, is correct. It recommends that the most feasible waste treatment options are incineration, landfill and export of waste (see Recommendation 7).

Trade-Offs

The Review considered the health and social impacts of residual waste management in Scotland. This included a Rapid Evidence Review on health impacts from Public Health Scotland, which confirmed its previous view that such impacts were likely to be small. The Review also considered the impacts on local amenity; the link between deprivation and location of facilities; perception and employment, as well as the Scottish Landfill Communities Fund and heat and energy offtake. The Review additionally heard from stakeholders regarding the difficulties they experienced engaging with planning processes and difficult relationships with local facilities. The Review finds that communities deserve more authentic and committed engagement from local authorities and industry than is currently sometimes the case (see Recommendation 8 and Recommendation 9).

Decarbonisation

The Review has found that currently, incineration is less damaging to the environment than landfill. However, increased incineration, changes to waste composition and wider decarbonisation will make this less favourable over time. To assist in monitoring this, the Review has recommended that greenhouse gas (GHG) emissions from incineration are reported separately from other energy-related emissions. (see Recommendation 12)

Separate work has been commissioned to inform further consideration of opportunities to decarbonise the residual waste treatment infrastructure sector in Scotland, with the main focus on waste incineration (Topic 5). In the meantime, the Review has provisionally recommended improving pre-treatment processes before incineration, with a particular focus on plastics (see Recommendation 13). Additionally the Review has provisionally recommended that combined heat and power should be pursued for as many incineration facilities as possible (see Recommendation 14).

4

Stop, Sort, Burn, Bury?

Independent Review of the Role of Incineration in the Waste Hierarchy in Scotland April 2022

Recommendations

The Review's Recommendations are summarised here for ease of reference, but should be considered in the context both of the discussion around them in the Report and of the Report as a whole.

Recommendation 1: Scottish Government should rapidly seek further reductions in the proportion of recyclable materials in the residual waste stream. It should do this in the forthcoming Route Map.

Recommendation 2: The Scottish Government should develop better waste management data, especially around the composition of all types of waste and the arisings and fate of commercial and industrial waste, and improve its capacity to model future trends across the whole resource and waste management system. The forthcoming Route Map should set out how the Scottish Government will do this.

Recommendation 3: Industry, local authorities and the Scottish Government should do more to make data around waste in general, and around incineration in particular, more transparent and accessible for all stakeholders. This should be done alongside development and implementation of the Route Map.

Recommendation 4: Effective immediately, the Scottish Government should ensure that no further planning permission (i.e. beyond that already in place) is granted to incineration infrastructure within the scope of this Review unless balanced by an equal or greater closure of capacity. The only exceptions to this should be those outlined in Recommendation 10.

Recommendation 5: As part of an overall strategic approach to planning and deploying waste management capacity (see Recommendation 11), the Scottish Government should develop an indicative cap that declines over time for the amount of residual waste treatment needed as Scotland transitions towards a fully circular economy.

Recommendation 6: When negotiating contracts for residual waste management treatment, local authorities should specifically address the risks of lock-in and ensure those contracts are aligned with meeting Scotland's current and future targets on resource and waste management.

Recommendation 7: The most feasible treatment options to manage Scotland's residual waste are incineration, landfill and export of waste. Scottish Government should work with local authorities to ensure they have a solution to manage their residual waste in 2025 based on this.

Recommendation 8: As part of the strategic approach referred to in Recommendation 11, Scottish Government and Local Authorities should ensure that adequate time and resource is dedicated to local and community engagement.

Recommendation 9: Operators of all residual waste treatment facilities should work to significantly strengthen community engagement and trust before, during and after development. Clear guidelines for authentic and effective community engagement

Stop, Sort, Burn, Bury?

Independent Review of the Role of Incineration in the Waste Hierarchy in Scotland April 2022

should be co-produced by Scottish Government with community groups and local authorities by the end of 2023.

Recommendation 10: Scottish Government should urgently work with local authorities in remote and rural areas of Scotland without a settled residual waste management solution to meet the Ban to explore options that might, if fully justified, lead to the creation of a small amount of additional capacity.

Recommendation 11: Scottish Government and local authorities should work with industry to develop a strategic approach to planning and deploying waste collection, reprocessing and management facilities by the end of 2023, which takes account of the key issues. The Scottish Government should consider how best to incorporate this into the proposed fourth National Planning Framework.

Recommendation 12: The Scottish Government should report greenhouse gas emissions from incineration separately from other energy-related emissions as soon as possible, ideally from the 2021 data onwards.

Recommendation 13: (Provisional) The Scottish Government should immediately strengthen existing requirements for pre-treatment and work with local authorities and industry to apply them to all existing and future incineration facilities to remove as much recyclable material as feasible, with a particular focus on plastics.

Recommendation 14: (Provisional) The Scottish Government and local authorities should continue to work with industry to deploy combined heat and power for as many existing incineration facilities as possible.