



Technical Support to Essex County Council in determining Rivenhall Application

CRITICAL REVIEW OF ADDITIONAL INFORMATION SUBMITTED BY APPLICANT

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1 Introduction

BPP Consulting has been commissioned by Essex County Council to review a report produced by SLR entitled 'Essex Waste Need Assessment Review' October 2018 (SLR Ref: 416-08866-00001). This presents a critique of the updated Need Case produced by BPP Consulting. The applicant has submitted an additional report entitled 'Addendum to the Essex Waste Needs Assessment Review in response to Queries Received from Essex County Council' dated November 2018 and this report covers the contents of that too.

In particular:

1. Critical Review Of The Capacity Gap Assessment Presented In Section 3, And The Alternative Interpretation Of Capacity Data
2. Produce Responses To The Comments Raised In Section 4 Of The SLR Report. And
3. Review Of The Data Used By SLR To Compile The Figures presented in Their Report.

In addition to the above, advice on the following points:

Q1: When calculating existing operational waste treatment capacity – is it best practice and/or in your experience appropriate to consider the planning permission and/or environmental permit limit capacity or base it on past actual throughput.

Q1a. If past actual throughput has been used, is it considered one year's throughput could be defended to be representative.

Q2: It is the WPA understanding that Environmental Permits are often issued for a specified scale of capacity, such that this may not represent an exact capacity for the facility?

Q3: In your experience is it common that a facility granted planning permission will often not operate such as to reach the capacity applied for?

Supplementary request: to provide analysis of the recently published Resource & Waste Strategy and the possible impact of it on the determination of the proposal before the Council.

2 Critical Review of Capacity Gap Assessment Presented In Section 3

2.1 Context

The Non-Hazardous Waste Capacity Gap Update (May 2018 v1.2r1) for Essex & Southend on Sea concluded that:

"Comparison between the tonnage of non-hazardous waste requiring management shown in Line 5 Table 9 (0.84 million tonnes at 2017 and 0.89 million tonnes at 2035) and operational consented capacity 1.36mtpa (Table 10) suggests there is no recovery capacity shortfall for non-hazardous waste management throughout the Plan period."

The basis on which that conclusion was arrived at has now been challenged by SLR on behalf of the scheme promoters Gent Fairhead. In particular they challenge the assessment of capacity presented in Table 9 of the Capacity Gap Update reproduced as Table 1 below:

Table 1: Consented Operational Capacity for facilities providing recovery capacity for C&I waste in the Plan Area (tonnes) as at 31 March 2017

Facility Type	Capacity (tpa)
End of Life Vehicles	405, 401
Metal Recycling	318,003
Materials Recycling /Recovery	626,667
Tyre Recycling	11,110
	1,361,181

The capacities applied for each site were presented in a supporting Appendix.

SLR has examined amongst other matters the assumed capacity values and presented its alternative assessment of capacity concluding that in fact the available capacity is substantially less than was assessed and that a capacity gap does in fact exist contrary to the findings presented in the Update. While SLR also examined the assessment of arisings it broadly agrees the value so the quantum of provision needed is not subject to challenge.

The previous assessment of capacity has been reviewed in light of the comments raised and the following report lays out the findings. The purpose of the exercise is to establish if in fact there is sufficient consented capacity, operational in the first instance i.e. excluding consented to be constructed capacity, to prevent a capacity gap emerging to manage the equivalent of up to 890,000 tonnes of non hazardous waste projected to require management at 2035 excluding LACW and biowaste.

2.2 Approach

2.2.1 Sources of Capacity Data

A number of different sources are available from which the capacity of waste site may be ascertained. These are listed as follows:

1. Planning Consent. Some planning consents may include a condition which specifies an annual maximum for waste inputs.
2. Planning Application: a standard question on the application form for a waste management facility is maximum annual input/throughput.
3. Environmental Permit: Most waste related activities are subject to permit. This permit may state an annual limit for waste input. This may be to limit the possible environmental effect of the facility on the locality with broad thresholds set by certain permits types.
4. Annual Inputs: Waste subject to a permit must report to the Environment Agency on a quarterly basis the quantity of waste received during that period. This data is then compiled into a single dataset which presents the data for all sites in England subject to a waste related environmental permit. This database is known as the Waste Data Interrogator, acronym WDI.

An assessment of the reliability of the sources above is presented in Table2 below.

Table 2: Reliability Assessment of Available Data Sources for Waste Management Facility Capacity Assessment

Data source	Reliability Rating	Justification
Planning Consent	Medium/High	A planning condition defines the maximum amount of waste that may be received. While sites may process significantly less waste in practice, such a condition defines the potential of the site which may be exploited.
Planning Application	Medium	The stated amount will have been defined by the prospective operator reflecting its aspirations without consideration of the site context and possible constraints. Therefore may be higher than might actually be received in practice.
Environmental Permit	Low/Medium	Thresholds set by permits may be significantly greater than may be achieved in reality. This is because certain permit types are only available with set tonnages e.g. 5,000tpa, 25,000tpa and 75,000tpa. These values provide a reference point where no limit is set in planning.
Annual Inputs (WDI)	Medium	Data on waste inputs in any particular year may not be a reliable indicator of capacity. Inputs may vary for a number of reasons. For example operators of multiple sites may reduce inputs at certain sites to maximise capacity at others. In order to counter annual variability ideally input data over a number of years ought to be examined and the peak value taken - as that represents what actually may be received in any year, all other things being equal. This is a change from the previous assessment which used an average value across reported inputs. The WDI is available from 2009 to 2017.

To provide a context for the updated assessment, an initial review of the most current permitted site input data for actual inputs to eligible sites in the Agency WDI 2017 (released September 2018)¹ reveals the following:

Table 3: Aggregated Eligible Site Inputs Based Solely on WDI 2017 data

Facility Type	Inputs (tpa)
End of Life Vehicles	88,366
Metal Recycling	198,098
Materials Recycling /Recovery inc WEEE Processing	356,363
Tyre Recycling	Exempt - not listed
	642,827

When compared with the projected capacity requirement of 890,000tonnes in 2035 if inputs are to be taken to represent capacity this suggests that based on the most recent year data only there may be a shortfall of capacity of c250,000tpa. However this approach fails to acknowledge that the inputs to a particular site in 2017 may not be anywhere near what the site is actually capable of processing i.e. its capacity potential. This capacity potential may be defined by any planning condition which limits inputs, a permit limit or a physical limitation on the quantity of waste that can actually be processed. As such the WDI 2017 value is not a reliable data point from which to assess. It is highly likely that the true capacity value for the Plan Area will be somewhat greater than that indicated by that, or any other, single year data for actual inputs.

In order to establish what the potential may actually be, consideration has been given to individual planning permissions, permit limits and the peak inputs as shown by the WDI going as far back as 2009. Following review of the data and consideration of the reliability assessment a number of scenarios have been explored as shown below:

1. Maximum Theoretical using Planning Permission max, or Permit max (where there is no planning limit). This scenario gives primacy to the planning permission limit and will define the upper limit of capacity. This also ignores those sites where actual input values actually exceeded the planning limit.
2. Planning max plus WDI peak - use planning permission limit where there is one, if not use WDI peak for 9 years instead of permit max.
3. WDI 9 year Peak- only use actual input data to test the point relating to the reliance on planning permissions on the one hand and unrepresentativeness of reliance on a single year data alone on the other.

¹ <https://data.gov.uk/dataset/dd8629ad-bd32-4db3-a07a-879737964f23/waste-data-interrogator-2017>

The difference between what consented capacity may be used for and what it may have actually been used for in the past.

SLR has made a point that because a site may have received waste from non C&I waste stream such as CDEW in the past the capacity assessed as being available ought to be limited to reflect this. This displays a misunderstanding between what a planning consent actually allows and what may take place onsite in any particular year. Providing:

1. the source of inputs is not restricted by the planning permission the capacity at any particular site could be used entirely to manage C&I waste should the market provide it; and
2. the capacity has not been counted towards meeting the projected management need of another waste stream in the Waste Needs Assessment (BPP Consulting 2015).

If condition 1 and 2 above hold then the capacity is available to be counted towards C&I waste stream in totality. This is on the basis that all operational capacity ought to be counted towards a management need of one waste stream or another in the Waste Needs Assessment process.

2.2.2 Cleansing of Dataset

The opportunity has been taken to refresh and update the listing to reflect the most current state of affairs regarding operational capacity. Where new sites have come on stream during the intervening period capacity has been added, while capacity at sites that have ceased to operate has been omitted. For transparency the sites included are listed in Appendix

It should be borne in mind that this process has been led by reference to the Environment Agency permit register but there may be cases where a site no longer has an environmental permit but the actual use for a waste management purpose persists. That is to say a site with an established waste use is only truly lost if the use of the land is formally changed through planning consent being granted for a non waste use. Permissions for most non waste use likely to affect such sites would be granted by the District or Boroughs within the County (excluding Southend on sea which being a unitary authority grants all permissions).

2.3 Findings: Refreshed Capacity Assessment Scenario outcome

Table 4: Capacity Assessment Scenario Outcome

Facility Type	Capacity (tpa)				
	Original Assessment	Scenario 1 (Max theoretical)	Scenario 2 (Planning Plus WDI peak)	Scenario 3 (WDI Peak only)	SLR
End of Life Vehicles	405,401	1,081,349	352,929	194,770	23,000 ²
Metal Recycling	318,003	833,296	360,160	330,213	104,000 ³
Materials Recycling /Recovery	626,667	1,095,781	758,867	493,388	111,000 ⁴
Tyre Recycling	11,110	3,500	4,610	Exempt	0
Total	1,361,181	3,013,926	1,475,456	1,018,371	250,000⁵
Non Hazardous Waste Shortfall	890,000	890,000	890,000	890,000	840,000 SLR value
Surplus or shortfall against capacity need	+471,181	+2,123,926	+585,456	+128,371	-590,000

The above table shows that under all three scenarios modelled there would be more than enough recycling capacity to manage the equivalent of up to 890,000tonnes of non hazardous waste projected to require management at 2035 by a considerable margin. It is notable that Scenario 3 simply adopts the peak actual input ignoring the planned potential which is considered to underestimate the true capacity. This compares with the very pessimistic assessment presented by SLR based on a single year of input data.

2.3.1 Footnote relating to Capacity Type

As described in Section 3 Policy context of the adopted Plan the principal objective is twofold:

1. To move waste up the hierarchy (as required by the Waste Framework Directive and enshrined into English law by the Waste (England & Wales) Regulations 2011); and
2. To assure Net Self Sufficiency (where it is practicable). The proximity principle is presented as a reason why net self sufficiency ought to be pursued as it recognises that the point where waste arises may be closer to facilities located outside the Plan Area and vice versa.

2.3.1.1 Moving Waste Up The Waste Hierarchy

The movement of waste up the hierarchy is a key objective of national policy. This is reiterated in the recently adopted national Resource & Waste Strategy (December 2018). In the context of the overall category of 'recovery', preparation for reuse, recycling and composting comes above energy from waste (classed as 'Other recovery') in the Waste Hierarchy This means that the provision of capacity to recycling or compost waste ought to be given preference to that which merely extracts the energy value of waste.

² From chart on p11

³ As above

⁴ From chart on p 17. Chart on p 15 gives 106ktpa total site throughput.

⁵ From chart on p17. Note individual facility type throughput entries given as 0.13 metal/ELV and 0.11 materials recycling sites i.e. 0.24.

2.3.1.2 Assuring Net Self Sufficiency

Given that waste flows between administrative areas, it is acknowledged that capacity provided within the Plan Area will receive waste from outside the Plan Area for management. Waste also flows outside the Plan Area for management. Providing the quantity of waste managed within Essex/SoS exceeds that exported is positive, then net self sufficiency is being achieved. There is no expectation that each tonne of waste produced within the Plan Area be dealt with within the Plan area. Similarly there is no expectation that provision be made for the management of every type of waste produced in the Plan Area at every level of the waste hierarchy. To do so would result in potential sub optimal operation of the market as capacity of certain types such as Energy from Waste are subject to economies of scale and hence are only viable above a certain guaranteed tonnage. Similarly there has been a rationalisation of MRF capacity across the UK ⁶with greater reliance on 'super MRFs'.

Where recycling and composting capacity provided exceeds the projected need for waste arising in the Plan Area then it is theoretically available to receive waste from outside the Plan Area. Given that this will be moving waste up the hierarchy this is to be seen as a positive contribution. If as a consequence there is no identified capacity gap for the management of waste through means lower down the hierarchy this is not to be regarded as a shortcoming.

2.3.2 Facility Type Scope to Vary Throughput

The capacity of particular sites to increase the throughput will vary according both to the type of facility and the facility setting. Table 5 below presents a summary of the limiting factors that may apply to each type regardless of site specific content which will tend to be governed by planning consent and/or the environmental permit.

Table 5: Summary Factors Affecting Input by Facility Type

Facility Type	Limiting Factor	Considerations
Thermal treatment	Thermal Load	Calorific value/moisture content of input.
Biological Treatment inc MBT & Composting	Residence time for biological processes	Organic content of input Degradability of input
Physical Treatment inc sorting	Processing capacity	Processing speed Shift Pattern and Operational Hours

From the above it is apparent that while thermal and biological treatment facilities may be constrained by inherent limitations in the processes involved, the same does not apply to physical treatment facilities. The potential for expansion of operations at these types of facilities is significant given sufficient staff, machinery or operating hours. It is these types of facilities that account for the bulk of the capacity counted in this assessment.

⁶ DS Smith closed its Southampton MRF in 2013, as did Biffa its £13 million Trafford Park MRF.

RESPONSE TO APPLICANT CRITIQUE OF ECC NEED UPDATE

END OF LIFE VEHICLE SITES								
Site name/Location	Operator	Capacity Used in 2018 WNA Update	Max Theoretical	Planning + WDI 9yrs	WDI 9yr peak	SLR	SLR Reason	BPP Response
Hovefield	Total Waste Management	150,000	150,000	150,000	69,812	6,600	inert/C&D input & pp ends 2019 (from AMR)	Inert/C&D input actually scrap metals 100% of which could be sourced from C&I stream. Permanent permission
Martells Quarry, Ardleigh	Nationwide Metal Recycling	26,536	74,999	31,140	31,140	0	inert/C&D input	Inert/C&D input actually scrap metals 100% of which could be sourced from C&I stream.
Roachside Recycling Centre	Rochford Scrap Co. Limited	7,836	74,999	29,382	29,382	1,100	None given	WDI 2016 single year not representative
Haven Rd Colchester	Autobreak (Colchester) Ltd	7,826	0	11,349	11,349	5,000		WDI 2016 single year not representative
Edinburgh Place, Harlow	C, T, A & L Hill t/a Harlow Metal Recycling	5,143	74,999	10,626	10,626	0	inert/C&D input	Inert/C&D input actually scrap metals 100% of which could be sourced from C&I stream.
Vanguard Way, Shoeburyness	Imperial Metal Recyclers Ltd	2,197	2,500	8,086	8,086	Not assessed	Sub 5k t	
Haven Road TS Hythe Quay	Mr G N & Mrs L K Watchorn t/a G&L Autospares	4,898	5,000	5,681	5,681	Not assessed	Sub 5k t	
Morelands	Kevin O'Sullivan t/a Essex Auto Recovery	4,596	4,999	5,500	5,500	Not assessed	Sub 5k t	
Steeple Road	Wisbey Salvage And Spares Limited	New site	74,999	5,108	5,108	New site		
Bottles Hall	John Whiting Ltd	2,521	2,499	3,805	3,805	Not assessed	Sub 5k t	
Good Companions Garage	T Street	2,065	4,999	3,030	3,030	Not assessed	Sub 5k t	
Cordons Farm Depot	J W M Engineering	10,000	74,999	10,000	2,466	Not assessed	WDI 2016 entry	
Allshots Farm	S J Bell	1,850	5,000	1,850	1,850	Not assessed	Sub 5k t	
Thoby Priory	Brentwood Auto Spares Ltd	895	5,000	1,502	1,502	Not assessed	Sub 5k t	
Foundry Yard, Walton the Naze	G Fuller t/a Tendring Recycling	688	5,000	1,191	1,191	Not assessed	Sub 5k t	

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Windsor Trading Estate Downham	T H Loeber & Partners t/a Chase Autos,	739	5,000	1,062	1,062	Not assessed	Sub 5k t	
Steeple Road, Lower Farm	SJ & JM Rogers t/a Buck Rogers Car Breakers	244	5,000	592	592	Not assessed	Sub 5k t	
Unit 1a Springwood Ind Est	Boyton Cross Motors Group Ltd	New site	74,999	556	556	New site		
Oxford Road, Clacton on Sea	Edward Caro t/a Vauxhall Performance & Spares Centre	150	4,999	419	419	Not assessed	Sub 5k t	
Brunel Road, Manor Trading Estate	G T Breakers t/a First Call Renault	5,000	5,000	5,000	370	Not assessed	WDI 2016 entry	
Brickfields Way	Copart UK	144	4,999	278	278	Not assessed	Sub 5k t	
Drakes Lane, Boreham	Stevens Gary t/a 'Stevens V W Dismantlers	New site	2,499	255	255	New site		
The Yard, Manningtree	Glenn Sutherland t/a Ace Auto Salvage	138	2,500	245	245	Not assessed	Sub 5k t	
Kings Road Charfleet Ind Estate	AJ England t/a Canvey Autobreakers	188	2,499	229	229	Not assessed	Sub 5k t	
Unit 4 Kings Haven	Nirro	800	4,999	800	227	Not assessed	Sub 5k t	
Unit 4 Manor Trading Estate	Gala Motors Limited	New site	74,999	201	201	New site		
Sadds Yard, Clacton on Sea	PR & RD Napier t/a Clacton Car Breakers	8,000	8,000	8,000	200	Not assessed	Sub 5k t	
Charfleets Ind Est	Humphrey John t/a 'Vauxhall & Transits	New site	2,499	130	130			
Priory Hall Farm	Smith Ian t/a Priory Farm Products	New site	4,999	120	120			
Horsecroft Place, The Pinnacles	John Walton t/a UK Spares	55,875	55,875	55,875	103	Not assessed	No WDI 2016 entry	
Archers Field Close, Burnt Mills	Agbaje Tokunbo t/a Basildon Car Breakers	New site	2,499	100	100			

Italicised entries indicate planning limits

Listed in rank order by peak WDI input.

Total of listed sites adds up to 194,418t additional tonnage of 352tpa from sites with peak input of less than 100tpa pa.

RESPONSE TO APPLICANT CRITIQUE OF ECC NEED UPDATE

METAL RECYCLING SITES								
Site name/Location	Operator	Capacity Used in 2018 WNA Update	Max Theoretical	Planning + WDI 9yrs	WDI 9yr peak	SLR	SLR Reason	BPP Response
The Boreham Recycling Centre	European Metal Recycling Ltd	15,977	180,000	90,774	90,774	24,900		WDI 2016 single year not representative
Harvey Road, Basildon	Benfleet Scrap Co Ltd	New site	75,000	75,000	69,536	New site		
Randalls Works, Woodside	Total Waste Management Ltd	37,350	74,999	64,040	64,040	0	inert/C&D input	Inert/C&D input actually metals 100% of which could be sourced from C&I stream.
Brightlingsea Export Terminal	Oliver's Wharf Limited	15,309	200,000	44,470	44,470	Not assessed	WDI 2016 entry	
Unit 16, Brunel Road, Manor Trading Est,	Benfleet Scrap Co Limited	New site	75,000	27,029	27,029	New site		
The Scrap Yard, Dusty Lane , Goodriches	Brand and Howes Environmental Ltd	75,000	75,000	10,366	10,366	200	inert/C&D input	Inert/C&D input actually metals 100% of which could be sourced from C&I stream.
Woolmongers Lane, Thele	M Juniper t/a Mark's Commercials	1,863	74,999	9,744	9,744	Not assessed	Sub 5k t	
The Yard, Wrexham Road, Laindon	Charlie McDermott t/a Mackers Total Recycling Limited	33,000	33,000	33,000	8,517	1,200	None given	WDI 2016 single year not representative
Whitehouse Meadow, Felsted	A Clarke & Sons Ltd	1,798	5,000	2,840	2,840	Not assessed	Sub 5k t	
Haven Road TS	Charles Trent Ltd	1,087	9,999	2,082	2,082	Not assessed	Sub 5k t	
Progress Business Park	Platinum Batteries (Europe) Limited	479	24,999	504	504	Not assessed	Sub 5k t	
Pafkin Site	Doe Metal Recycling	300	300	300	300	Not assessed	Sub 5k t	
Dash's Yard, Latchingdon	Frederick William Dash	New site	5,000	12	12	New site		

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MATERIAL RECYCLING SITES								
Site name/Location	Operator	Capacity Used in 2018 WNA Update	Max Theoretical	Planning + WDI 9yrs	WDI 9yr peak	SLR	SLR Reason	BPP Response
Essex Regiment Way/Belsteads Farm	Dunmow Skips	300,000	150,000	150,000	108,194	26,000	75k inert/C&D plus capacity limited to 150ktpa?	100% input could be sourced from C&I stream. WDI single year not representative Permission limit amended
Edinburgh Way, Harlow	O-I Glass UK	60,135	60,135	91,522	91,522	12,000	Furnace accepting glass from LACW C&I sources. Assumed that 20% of capacity available for C&I	100% input could be sourced from C&I stream.
Land At Brickfields Way, Rochford	James Waste Management Llp	New site	250,000	250,000	53,611	New site		
Perry Road, Witham	Essex Reclamation	45,521	74,999	50,159	50,159	30,000	13k excluded as LACW	100% input could be sourced from C&I stream.
Green Acres	Colchester Skip Hire	48,000	48,000	48,000	48,000	43,000		100% input could be sourced from C&I stream. WDI single year not representative
Quayside Industrial Park	Green Recycling Ltd	45,000	75,000	45,000	45,000	21,000		WDI single year not representative
Veolia MRF Archers Field	P G R Waste Management Ltd	55,000	75,000	75,000	44,342	5,000		100% input could be sourced from C&I stream. WDI single year not representative
Whites Yard, Basildon	Clearaway Recycling Limited t/a GBN Services	25,000	162,250	25,000	25,000		03k inert/C&D	100% input could be sourced from C&I stream.
Southfields Industrial Estate	Great Bear Distribution Ltd	9,558	20,000	12,086	12,086	10,000		WDI single year not representative
Brooker Road, Waltham Abbey	Recycle Telecom Ltd	New site	400	400	8,609	New site		

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Temple Farm Ind Est, Southend On Sea	Altech Trading Company Limited	New site	74,999	3,093	3,093	New site		
Hallsford Bridge,	P W Keen Ltd	905	24,999	2,146	2,146	60		WDI single year not representative
Tavern Garage The Causeway	Alan Wiseman	1,500	5,000	6,120	1,285	410		WDI single year not representative
The Tekhnicon Centre, Braintree	R D Trading Limited	New site	74,999	341	341	New site		

TYRE RECYCLING SITE								
Site name/Location	Operator	Capacity Used in 2018 WNA Update	Max Theoretical	Planning + WDI 9yrs	WDI 9yr peak	SLR	SLR Reason	BPP Response
12 Fulton Road, Manor Trading Estate, Benfleet, SS7 4PZ	Tyre Reclaim Limited	3,500	3,500	3,500	0	0		Site converts tyres to blocks for use in construction

3 Responses to Comments Raised in Section 4 of the SLR Report.

In Section 4 of the SLR Report a scrutiny is provided of the 3 documents published by the authority in May 2018, namely

- The AMR 2018
- Waste Needs Assessment Update - Updated Baseline for C & I Waste generated in Essex and S-O-S May 2018
- Non-hazardous Waste capacity gap update May 2018

The SLR report applies an alternative method to calculating consented capacity and as a result arrives at a capacity gap of 0.59 million tpa compared with the capacity surplus indicated by the BPP Updated WNA. Table 1 presents the principal points of difference and BPPs observations on the reasoning presented:

Issue	BPP/ECC Approach	SLR Proposition	BPP Response to SLR Approach
AMR Review			
Need assessment approach	Capacity counted of facilities that have planning permission that are either operational or under construction.	Count operational capacity only justified by citing the NPPW "consider the extent to which the capacity of existing operational facilities would satisfy any identified need"	The intention of the sentence from NPPW cited reinforces the approach taken by BPP/ECC since it is an exhortation to look to existing operational capacity in the first instance, so as to avoid over provision. This is the exact approach followed in the Capacity Gap Assessment.
Double Counting	Exclusion of WTS capacity from capacity estimation in Table 12	Inclusion of ELV and MRS capacity "does not necessarily adhere to this approach".	Treatment of some sort normally takes place at ELV and metal recycling sites and therefore they offer more capacity than pure Waste Transfer Facilities.
Capacity Estimation	Where capacities cannot be ascertained from either planning consent or permit, an average of the input from the WDI across 5 years was taken	Need assessment findings are ..."highly contingent on average capacity assumptions and not reflective of actual capacities achieved."	Based on a number of years of actual inputs averaged out - so contrary to the suggestion it is based on actual data. It is arguable if that is a correct approach as it moderates out peak years and it is more correct to look to peaks as indicating annual maxima where it is not specified in a planning consent. This means that the assessed capacity even against actuals would be greater than that taken by ECC in some cases. (see Section 2 for reworked values)
Waste treatment		The Capacity Gap update contradicts the comment that "It	The positions are not contradictory but it would be remiss of the Authority to grant consent where that would result in over provision of Other Recovery

RESPONSE TO APPLICANT CRITIQUE OF ECC NEED UPDATE

need		remains important to continue to increase recovery of materials and energy from waste as well as composting rates to continue the reduction in the volume of waste going to landfill".	capacity at the expense of Recycling and Composting undermining the Waste Hierarchy.
Export reliance	Export does not necessarily demonstrate a capacity gap since it is offset by imports.	The finding of a 0.59Mtpa per annum capacity gap is consistent with the Council's own AMR giving a net export of 0.57Mtpa	The Capacity Gap update takes precedence over the AMR which presents gross values before deductions so only indicates the broad 'direction of travel' rather than specific values.
C&I arisings	C&I waste baseline of 0.915Mt in 2016 and LACW baseline of 0.806Mt	Raise concern about growth rates used but don't query the inconsistency in baseline values. "No rationale is provided for the apparent transition from rapid growth in C&IW prior to 2016 , to negligible growth thereafter"	The values shown in Figure 12 are gross before deductions and adjustments for double counting made in the detailed methodology used to arrive at the C&I waste baseline estimate, the outcome of which SLR has broadly agreed. Projected growth in C&I waste arisings have been accounted for in the forecast process (see Section 2.6 of the Capacity Gap update).
Treatment Capacity	ELV capacity estimates include two sites with end dates accounting for 160ktpa	SLR will seek to determine whether the capacity loss as a consequence of time limited capacity has been taken into account	Review has confirmed that these sites have permanent permission, contrary to the position reported in the AMR, which listed the consent implementation deadline. Given the permission has been implemented this is no longer relevant.
		Colchester Biogas plant is WWTW facility and therefore capacity ought not to be counted towards "recovery capacity relevant to the treatment of solid waste."	This capacity has not been counted in the reassessment exercise.

UPDATED BASELINE FOR COMMERCIAL & INDUSTRIAL WASTE

Issue	BPP/ECC Approach	SLR Proposition	BPP Response to SLR Approach
C&IW definition		The definition does not include ELVs from private use and therefore ELV processing site capacity ought not to be included	What waste stream would SLR class ELV from private use as being within? Unless SLR wishes to argue that no ELVs class as C&I waste then the distinction between whether a vehicle is sourced in any particular year from householders or from commercial sources e.g. ex fleet is not relevant to the available capacity to process C&I waste providing the capacity has not been counted towards its management elsewhere, which it hasn't.
Arisings estimation methodology	Adapted the method from national reconcile	Applying the approach to individual local authorities introduces a potential serious source of error about recording point of origin which "can be inaccurate in some cases."	The failure of some operators to classify inputs by specific origin has been examined and taken account of in the C&I estimation There is reason to believe that more waste than might be correct has been attributed to Essex given the historic understanding of Essex being "anywhere to the East of the River Lee" i.e. Greater Essex- parts of which now fall within London Boroughs. This is borne out by examination of the input data to the Stobart site at Tilbury. Nevertheless accepting there may be element of error unless there is reason to believe the error is against Essex and Southend on Sea its existence has no bearing on the final values. I would also add that I am an active member of the Defra waste data advisory panel where WDI data quality matters are reviewed regularly.
Should exempt site capacity be included?	Yes	The exclusion of exempt sites from the C&I waste baseline estimation methodology means exempt site capacity should not be counted either.	No attempt has been made to estimate the quantity of waste that may be managed through exempt sites as they are now excluded from the national estimation of C&I arisings. This is because it is considered there is no meaningful way to estimate inputs on a generic basis. This is different to including the capacity of specific sites that they have planning consent
C&IW recovery capacity	Include whole capacity even where a particular site may have received a proportion of waste from other sources (providing the capacity has not also been counted as being available to serve the other waste stream).	Only include that proportion of capacity that has actually been utilised to manage C&I waste i.e. exclude that dealing with non C&I waste.	Use to manage some other streams doesn't actually prevent the capacity being used entirely for the management of C&I waste should an equivalent quantity of C&I waste become available in any particular year. Providing the capacity has not been counted towards the management of another waste stream this is legitimate- and it hasn't.

NON HAZARDOUS WASTE CAPACITY GAP UPDATE

Issue	BPP/ECC Approach	SLR Proposition	BPP Response to SLR Approach
LACW Capacity Gap		If above correct additional demand for a further 90ktpa	Even if this were to be found to be correct the additional requirement still falls within the recovery capacity surplus in any one of the 3 scenarios modelled.
Treatment Capacity	Inclusion of capacity at exempt sites even though inputs to these sites are no longer estimated.	The exclusion of exempt sites from the C&I waste baseline estimation methodology means exempt site capacity should not be counted either.	No attempt has been made to estimate the quantity of waste that may be managed through exempt sites as they are now excluded from the national estimation of C&I arisings. This is because it is considered there is no meaningful way to estimate inputs on a generic basis. This is different to including the capacity of specific sites where they have planning consent
Waste hierarchy	All sites counted	A number of sites including in the capacity gap assessment are only capable of transferring waste and therefore do not move waste up the hierarchy	Very few sites these days operate purely as transfer stations or are only capable of operating as such due to planning or logistic constraints. .What does SLR mean by the term "capable of"? It should be noted that even sites where recyclables are bulked do move waste up the hierarchy as per London Plan definition.
C&I biowaste	77% capture rate	None - but claim it would represent a "huge shift" and "there are no significant local or national efforts to bring this about".	The recently released National Resource & Waste Strategy targets food waste collection from households and businesses reflecting the recommendation of the National Infrastructure Commission Review which recommended support be offered to effect this roll out.

RESPONSE TO APPLICANT CRITIQUE OF ECC NEED UPDATE

C&I arisings	Caveat of underestimate given limitations of WDI data but likelihood that omission of certain elements of C&I w stream such as supermarket waste backhauled to distribution depots which are not permitted means that overall tonnage likely to be higher	Failure to count waste outside WDI means it is questionable whether the "capacity gap assessment is 'pessimistic'"	It is a point of information relating to the baseline estimate rather than the capacity gap assessment. Distinguish between the estimation of arisings and the determination of the capacity gap. It is correct to say the omission of the management capacity of this waste in the capacity gap exercise cancels out the omission of its accounting in the baseline estimation. This management flow is invisible to the method now applied.
Existing C&IW treatment capacity	Counted ELV, metal recycling and tyre recycling facility capacity	ELV, metal recycling and tyre recycling facilities are not capable of treating the majority of C&IW arising in Essex.	<ul style="list-style-type: none"> Capacity does not necessarily have to match waste materials arising. WPAs may be suited to host particular types of facility and provided the net balance is achieved it is accepted that waste will flow between WPA areas. The need to avoid duplication (and hence over) provision and respect the market is recognised in the nPPG as follows there is no expectation that each local planning authority should deal solely with its own waste to meet the requirements of the self-sufficiency and proximity principles. Nor does the proximity principle require using the absolute closest facility to the exclusion of all other considerations. There are clearly some wastes which are produced in small quantities for which it would be uneconomic to have a facility in each local authority. Furthermore, there could also be significant economies of scale for local authorities working together to assist with the development of a network of waste management facilities to enable waste to be handled effectively. <p>The ability to source waste from a range of locations/organisations helps ensure existing capacity is used effectively and efficiently, and importantly helps maintain local flexibility to increase recycling without resulting in local overcapacity.</p> <p>Paragraph: 007 Reference ID: 28-007-20141016</p> <ul style="list-style-type: none"> This approach is accommodated when preparing Waste Needs Assessments by first assessing management needs by principal waste stream but then looking across the streams to assess overall net self sufficiency. This is done by assessing flows into and flows out of a Plan Area across waste streams. Then confirm through DtC that capacity at the facilities to which waste flows out will remain available for the Plan period. Such flows need to be reciprocated for a Plan Area for net self sufficiency to be achieved

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		<p>Defra C&I survey indicates only 217ktpa metals arisings in whole East of England plus only 86ktpa discarded equipment that includes ELV.</p>	<p>SLR case relates to arisings rather than capacity. It is entirely possible for a Plan Area to host capacity in excess of its own needs where facilities operate under economies of scale. Net self sufficiency allows for export of an equivalent tonnage of another waste stream.</p> <p>ELVs were expressly included in the DEFRA C&I survey count within the discarded equipment category below is an extract of the report itself (p20):</p> <ul style="list-style-type: none"> Discarded equipment: End of Life Vehicles (ELV), batteries, waste electronics (WEEE) other discarded equipment <p>In addition for the purposes of national reporting Discarded Vehicles are reported almost entirely under the commercial and industrial waste type classification (1.3mt) with a minor amount (607t) reported as being Household waste⁷. This demonstrates that ELVs are considered to fall within the C&I waste stream.</p> <p>We therefore conclude that:</p> <ol style="list-style-type: none"> even if some of the ELV input received in any particular year may come from private owners this is still classed as C&I waste according to Defra; and moreover if it were to be regarded as municipal in origin this still does not limit a receiving site's ability to process ELVs arising from commercial and industrial sources in a subsequent year; and Given that the capacity has not been counted towards LACW management (as ELVs are not considered to be LACW), it is to be counted against the C&I waste stream.
		<p>The method used to quantify the capacity of ELV and MRS is flawed as it counts capacity by planning and not actual MRS receive and process ELV waste so risk of double</p>	<ul style="list-style-type: none"> The consented capacity is the consented capacity and will normally either be set to reflect the capacity originally applied for, reflecting the aspirations and expectations of the applicant, or limited by condition to ensure the operation takes place within acceptable parameters within the site context. This is entirely separate to the actual input of waste received in any particular year which may be influenced by a myriad of factors such as market conditions, commissioning issues, operational problems - none of which actually impinge on the theoretical capacity of a facility. There may be a risk of double counting inputs but that is different to capacity except

⁷ ENV23 - UK statistics on waste Update on the generation and management of UK waste, including the contributions made by various sectors. 20 Feb 2019
<https://www.gov.uk/government/statistical-data-sets/env23-uk-waste-data-and-management>

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		counting plus some household metals received so that capacity ought not to be counted	<p>where there is an inherent linkage between the waste output of one site and the input to another site. That is to say the capacity is stand alone and may be counted as being available for management of waste coming from any source.</p> <ul style="list-style-type: none"> Just because a site may have accepted metal from household sources it does not mean that capacity that may have been used by this particular input would not be available for management of similar waste from C&I sources should market conditions be more favourable. Even contractual arrangements are time limited and hence unreliable basis to assess availability of capacity. Again unless the capacity has been counted towards a capacity assessment for another waste stream, which it hasn't, then it ought to be counted here.
		A large fraction (potentially the majority) of ELV is devoted to private vehicles and cannot validly be included is part of C&IW recovery capacity	<ul style="list-style-type: none"> See above comments about origin being irrelevant to capacity ELVs were expressly included in the DEFRA C&I survey count within the discarded equipment category. <p>In addition for the purposes of national reporting Discarded Vehicles are reported almost entirely under the commercial and industrial waste type classification (1.3mt) with a minor amount (607t) reported as being Household waste⁸. This demonstrates that ELVs are considered to fall within the C&I waste stream.</p>
Capacity Gap		Duplicate comments above relating to ELV and Metal recycling capacity being counted and actual arisings of both being in excess of capacity and therefore capacity cannot exist.	<ul style="list-style-type: none"> See response above

2 ⁸ ENV23 - UK statistics on waste Update on the generation and management of UK waste, including the contributions made by various sectors. 20 Feb 2019
<https://www.gov.uk/government/statistical-data-sets/env23-uk-waste-data-and-management>

4 Responses to Specific Questions

Answers to the following questions relate to sites such as ELV or vehicle dismantling sites and not facilities involving engineered plant such as EfW or AD systems which may have a fixed input for operational purposes and to recoup the capital cost over a pre defined payback period for the investment. For example Energy from Waste plants require a minimum amount of feedstock to generate sufficient energy to raise steam and produce power efficiently.

Q1: When calculating existing operational waste treatment capacity – is it best practice and/or in your experience appropriate to consider the planning permission and/or environmental permit limit capacity or base it on past actual throughput.

A1: Generally we would use planning permission if a limit is specified, if not, the limit in the environmental permit where the limits imposed relate to actual operations and are not dictated by standard thresholds. Where there is no planning limit or applicable permit limit we would look across actual input data to identify a peak year (as per response below). WNAs produced to support Waste Plans that have been subject to examination and adopted have taken this approach so it is to be regarded as best practice.

Q1a. If past actual throughput has been used, is it considered one year's throughput could be defended to be representative.

A1a: No. It would be very unreliable to take input data for a single year as representative of the capability of a site. This is because the input may vary from year to year due to market conditions. Bearing that in mind we would review across a number of years (5 year period minimum) and identify a peak value. This would then be used as a baseline minimum value as it shows what a site is actually capable of managing within the current market. In some cases a margin of 20% is added on the basis that sites rarely operate at maximum capacity that it could, should market conditions change.

Q2: It is the WPA understanding that Environmental Permits are often issued for a specified scale of capacity, such that this may not represent an exact capacity for the facility? Is that correct.

There are two types of environmental permit, those issued for standard rule facilities and those issued for bespoke facilities.

- Standard Rules permits place predetermined annual tonnage limits on any operation covered by them regardless of their actual scale. This may mean that actual throughput would be significantly less than the permit actual permits. This may be overcome to some degree by reference to recently introduced Fire Prevention Plans which generally impose limits on the quantities of combustible waste that may be stored at any one time on site.
- Bespoke permits place annual throughput limits according to what an applicant has applied for - unless there is good reason to limit it for environmental protection grounds.

Q3: In your experience is it common that a facility granted planning permission will often not operate such as to reach the capacity applied for?

A3: This depends on the type of facility. For sites that do not involve engineered plant like EfW or AD that require a minimum throughput to gain a critical mass of material sites will generally operate close to its consented limit. Whereas facilities relying on physical processing often operate well below their capacity potential. Hence data for actual inputs are highly unlikely to represent their true capability particularly if taken for a single year. See Table 5 for outline reasoning.

5 Conclusions

Our analysis of the SLR critique identifies the principal differences in approach relating to:

1. What capacity is counted, actual throughout or what may be dictated by a planning consent;
2. The inclusion of the total capacity of sites identified as taking or being capable of taking C&I waste even if they have managed other waste streams; and
3. The counting of capacity for ELV and Metal Recycling towards C&I waste.

Taking each in turn.

1. How should facility capacity be assessed - using actual throughput or what may be permitted by a planning consent or environmental permit?;

- Facility capacity is primarily taken to be the maximum throughput permitted under the planning consent. This will normally either be set to reflect the capacity originally applied for by the applicant, reflecting its market assessment, or limited by condition to ensure the operation takes place within acceptable parameters within the site context.

This is entirely separate to the actual input of waste received in any particular year which may be influenced by a myriad of vagaries such as market conditions, commissioning issues, operational problems - none of which actually impinge on the notional capacity of a particular facility.

Where a planning consent does not specify a capacity then the next tier of evidence is the environmental permit, if it exists. If this permit sets limits by activity then this may provide a valid basis to assess capacity. In some cases the permit only sets bands which may not be a reliable basis and it is in this case where an assessment of actual throughput over time might be undertaken.

- If it is proposed that the only data relating to actual inputs is to be used as the basis for ongoing capacity assessment how should recently consented capacity that is under construction but not fully operational be allowed for? Clearly to ignore such capacity could result in over capacity if for some reason a further application were to come forward before the consented facility was fully operational. Also what about capacity that is dormant due to market conditions? It still exists and has the benefit of planning consent but may not be being utilised (fully or at all) due to market conditions.
- It also begs the question of what tonnage the Rivenhall developer actually expects to receive onsite and whether they in fact believe their facility will be capable of processing the quantity of waste consented/ applied for. The argument put by SLR suggests that the proposal may in fact provide significantly less capacity than the application claims.

2. The inclusion of the complete capacity of sites identified as taking or being capable of taking C&I waste even if they have managed other waste streams;

- Just because a site has accepted waste from sources other than C&I does not mean that capacity that may have been used by this particular input would not be available for management of waste from C&I sources. Much depends on market conditions which change from year to year and even contractual arrangements that may be in place will be time limited and hence are an unreliable basis to assess availability of capacity, even if the WPA were to be party to their content, which they are not.

3. The counting of capacity for ELV and Metal Recycling towards C&I waste management capacity.

- This reveals a misunderstanding as it suggests that every WPA ought to provide for the tonnage of every waste type that is forecast to be produced within its area. This is patently absurd and ignores the reality of the waste market which involves the flow of wastes across administrative boundaries according to the market which seeks to optimise provision. Therefore it is entirely possible for a Plan Area to host capacity in excess of its own needs for a facility and a particular waste type. This is where the principle of net self sufficiency would then allow for export of an equivalent tonnage of another waste stream for management elsewhere on the same principle.
- The principle of net self sufficiency applies across the piece, not specifically to particular waste streams. To say otherwise suggests that the market is expected to provide duplicate facilities in each and every WPA area. This could mean that facilities are sized sub optimally to be economic and may therefore either never be developed or fail - there are numerous examples of this. Taking a spatially optimal approach you might find that say Essex is the ELV processing 'capital' of the East of England while Suffolk is the AD 'capital' and as long as the interdependency is recognised through Duty to Cooperate and ultimately balances out that should be acceptable.
- Unless the capacity has been counted towards a capacity assessment for another waste stream, which it hasn't, then it ought to be counted towards C&I waste management.

6 Supplementary

6.1 National Update

6.1.1 Review of National Resource & Waste Strategy

The Evidence base document supporting the National Resource & Waste Strategy released in December 2018 states at page 78:

"According to our internal analysis,...significant additional residual waste energy recovery capacity such as incineration or advanced conversion technologies– above that already operating or planned to 2020 – would not necessarily be needed to meet an ambition of no more than 10% Municipal Solid Waste (MSW) to landfill by 2035, if a 65% MSW recycling rate is achieved by that same year. The analysis assumes refuse derived fuel (RDF) exports remain at current levels. (emphasis added)"

It was not clear if the capacity already consented at Rivenhall was counted in the national 'planned' capacity referred to above or not. Direct enquiries of Defra reveal the Rivenhall facility does not appear on the listing used, meaning that the above conclusion, that there may be sufficient capacity available nationally to meet the targets without additional capacity, holds even without the currently consented capacity at Rivenhall being taken into account.

6.1.2 Review of National Environment Agency Data

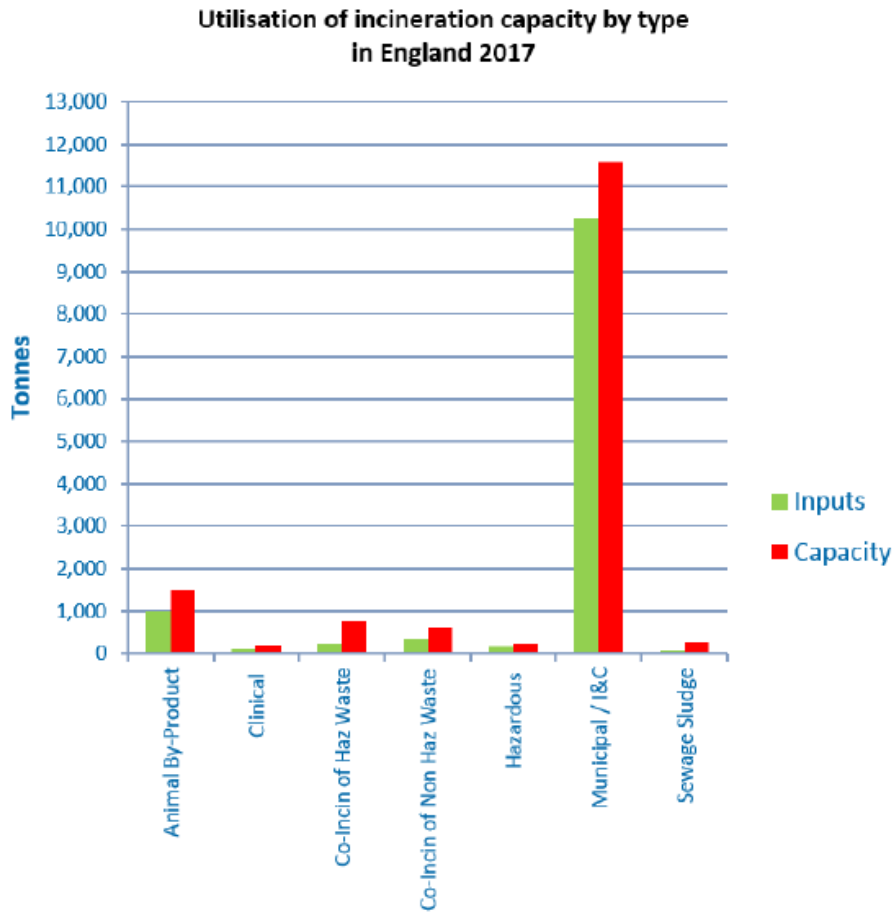
Graphs showing incinerator capacity utilisation by comparing actual inputs (based on data submitted by operators to the EA) and maximum plant capacity as defined by the environmental permit have been presented by the action group PAIN as support of a position that a case does not exist to build new EfW capacity as there is surplus capacity already.. See below example graph reproduced.

This shows that the operational incinerators received less than the maximum amount stated in the environmental permits issued by the Environment Agency. It should be borne in mind operating below the plant's theoretical maximum is something the operator would seek to avoid wherever possible as it would be losing out both on gate fees and receipts for power generated. However this discrepancy may be due to a number of reasons including:

1. The plants will be subject to downtime for maintenance or unscheduled stoppages; (the *Tolvik Report UK Energy from Waste Statistics 2016* indicates average availability across the UK plant fleet as being 90%) and/or
2. The calorific value of waste has risen (with removal of high moisture content such as food waste and pre processing to produce a more homogenous RDF) as the actual throughput is determined by the thermal capacity of the plant. This means less waste is needed to achieve the desired temperature for power generation; and/or
3. The capacity applied for was greater than that actually expected to be received to give a contingency of capacity - sensible bearing in mind sensitivity to variability in calorific value (point 2 above).

It is worth noting that when modelling energy recovery capacity nationally Defra analysts prefer to rely on input stated in planning applications over capacity stated in environmental permits because of the known contingency for variable c.v.⁹

Incineration utilisation



⁹ pers comm