



INTRODUCTION

Uttlesford DC (UDC) collects its dry recyclables in-house. The collected materials become the property of Viridor; and are subsequently transported and treated through a contract between UDC and Viridor, under the terms of which Essex CC (the disposal authority) provides transfer facilities (at Great Dunmow); and Viridor provides transport to its MRF and treatment of the materials for recycling.

These are changed arrangements since a TEEP assessment was first carried out for UDC: formerly the contract was with Bywaters and the transfer facilities were provided by Bywaters as part of that contract. The new contract was procured on a partnership basis i.e. a partnership of four Essex waste collection authorities (Basildon, Brentwood, Rochford and Uttlesford, with Basildon acting as lead authority) who procured the new arrangement on a collaborative basis but with prices and options for each Council by the division into lots.

In setting up these arrangements, UDC was fully cognisant of the requirements of the EU Waste Framework Directive (WFD) 2008 and the Waste England and Wales Regulations 2011 which flow from it. The Regulations (which were the subject of a judicial review) include Regulation 13 regarding the collection of glass, metal, paper and plastic for recycling.

UDC was therefore aware that the requirement of Regulation 13 is that these materials (i.e. glass, metal, paper and plastic for recycling) should be collected separately: but may be collected on a different basis in certain circumstances which are where it can be shown that it is not should technically, economically or environmentally practicability (TEEP).

Accordingly, as part of the original design of its recycling systems, options for collecting recyclables were considered and tested using TEEP criteria: although no official guidance as to how this was to be done was available at the time.

In late April 2014 WRAP published the Waste Regulations Route Map. WYG was asked by UDC to assess its chosen methodology on the basis of this Route Map. This report is an update to the initial TEEP assessment based on latest data for 2014-15 and the new arrangements, including current gate fees, recycling credits and pay rates.



THE SYSTEM DESIGN AND OUTCOMES

The system that UDC uses is designed to maximise the recycling / composting rate at an affordable cost.

The design is as follows:

- Residual waste collected fortnightly from a 180-litre wheeled-bin;
- Dry mixed recyclables (DMR) collected fortnightly, co-mingled including glass, from a 240-litre wheeled-bin;
- Garden waste collected fortnightly all year round excluding a shut down period from mid-December to mid-January from a 240-litre wheeled-bin on a chargeable basis; and
- Food waste collected weekly from food waste containers.

The size of the bins is designed to reduce residual waste and encourage recycling. In terms of comparative performance outcomes, the scheme is a success: in 2014/15 (at the time of writing the most recent data available for all local authorities) UDC had the 70th highest rate for recycling / composting in England at 50.3%: this is out of 320 collection and unitary authorities, meaning UDC's performance is among the top quartile of all local authorities in England.

The design of the collection system delivers an economic solution through three specific initiatives:

- First, the use of split-bodied collection vehicles for the main rounds, so that on one pass the householder has food waste and residual waste collected on one pass using the same vehicle: and a week later has food waste and dry recycling collected on one pass using the same vehicle. Therefore each household is passed once per week, except for those households which subscribe to the garden waste collection service.
- Second, collecting dry recycling (and food) across the whole District in one week and collecting residual waste (and food) in the other. This means that it is easier to deal with vehicle breakdowns, missed collections etc.
- Third, only collecting from Tuesdays to Fridays. This means that Bank Holiday catch-ups are not required (save for the Christmas / New Year period and Good Friday) giving residents greater certainty as to collection days and saving communications costs. It also provides greater economy, since UDC is very rural with consequential long travelling times: and the longer working day which this design delivers means that each round can service many more properties whilst still tipping twice per day maximum.



The resources used for collection are as follows (from 34,180 properties):

- Nine rounds each comprising a driver plus two loaders, which collect residual waste plus food waste on one week and dry recycling plus food waste on the alternate week;
- One round for restricted access collections comprising a driver and one loader using a 15-tonne vehicle; and
- Two garden waste rounds comprising a driver plus one loader.

In terms of volumes collected of household waste, in 2014/15 these were (from 34,180 households):

- Overall tonnages of waste: 29,308 tonnes;
- Residual waste: 14,577 tonnes (of which 13,412 tonnes were collected at the kerbside);
- Dry recyclables: 9,389 tonnes (excluding contamination), of which 8,476 tonnes were collected at the kerbside, alongside 747 tonnes of contaminants, a total of 9,223 tonnes;
- Compostable waste: 5,342 tonnes, of which: 2,958 tonnes were kerbside food waste, 956 tonnes kerbside garden waste and 1,428 tonnes 'bring' garden waste.

If measured in terms of kg per household for that year, the figures are as follows:

Total waste: 857 kg;

Residual household waste: 426 kg, of which 392 kg were collected at the kerbside);

Dry recycling: 275 kg (excluding contamination), of which 248 kg were collected at the kerbside;

Composting: 156 kg, of which 87 kg were kerbside food, 28 kg kerbside garden waste and 42 kg 'bring' garden waste);

This gives the following outcomes:

- Recycling rate: 32.0%;
- Composting rate: 18.2%;
- Combined recycling / composting rate: 50.3%.

These figures are worthy of some comment. The total waste arisings per household are very low – for many other Essex districts the figure is very much higher e.g. Basildon 1,005 kg; Braintree 910 kg; Brentwood 873 kg; Rochford 962 kg. The low figure for Uttlesford says much about the excellent work done in terms of designing a collection system that minimises waste.

The capture rate of dry recycling as a percentage of total waste arisings is significant. Again, looking at some other Essex authorities the figures are: Basildon 25.7%; Braintree 24.6%; Brentwood 30.8%;



Rochford 26.6%. Additionally, it is worth noting (as discussed later as a major part of the TEEP test) that the authorities in Essex collecting recyclables in separate streams collect even less than these figures, whether as a percentage (except Colchester) or in terms of kg per household.

USING THE WRAP ROUTE MAP

With the benefit of the WRAP Route Map, the following commentary works its way through the various stages.

Step 1

Here UDC should consider the waste collections covered; and the current waste collection system.

The waste collections being covered are household waste. The current waste collection system does collect the four materials (glass, metal, paper and plastic) for recycling: but these are not collected as separate waste streams.

It is worth noting that UDC delivers a recycling service (as well as a residual waste service) to schools. This includes the collection of food waste and the collection of dry recycling to the same specification as for households.

The published guidance also refers to the collection of food and garden waste: the system collects these on a separate basis, with garden waste collections on a chargeable basis.

The published guidance also refers to the collection of bulky waste and the system collects this and applies a waste hierarchy promoting reuse and recycling.

Step 2

Here UDC should consider how each waste stream is managed and what waste is recycled.

Residual household waste and bulky waste is not currently recycled: but there will be recovery and some recycling through the new MBT facility at Basildon (run on behalf of Essex County Council, the Waste Disposal Authority for UDC).



Dry recyclate collected is all recycled, except for fines and contaminants. The contract between UDC and Viridor is based on a contamination rate of 10% or below: and the contract documentation sets out detailed processes that are followed to determine the make-up of the recyclate and managing contamination.

Food and garden waste is treated through composting.

Step 3

Step 3 relates to the waste hierarchy: which has been applied throughout the decision-making process regarding the selection of recycling methodology.

Step 4

At this stage a number of questions are asked in relation to the four dry streams of glass, metal, paper and plastic. Working through these questions:

- Does UDC collect glass, metal, paper and plastic for recycling? Yes
- Are separate collections in place? No (so necessity and practicability questions to be answered)
- Are separate collections necessary to ensure that waste is recycled? No – waste collected for recycling is (apart from contaminants etc.) recycled
- Is there an approach to separate collection that is technically, environmentally and economically practicable? No – as the following tests show

Necessity test:

Here the quality and quantity of recycling is considered.

In terms of quality, the contract documentation requires that at least 90% of collected material shall be recycled. Further, the contractor is required to set out in their tender the methodology to be used so that good quality recyclables result from the process; and this information is then incorporated into the contract.

The minimum range of materials required to be accepted through the treatment contract is as set out below (details from the specification for the contract).



	<p>Target Materials</p> <p>Residents shall be advised TO present these items Rinsed. The Contractor shall ensure the Recycling of these materials regardless of particle size</p>	<p>Non-Target Materials</p> <p>Residents shall be advised NOT to present these items There is no requirement for the Contractor to Recycle these Items.</p>	<p>Non-acceptable materials</p> <p>Residents shall be advised NOT to present these items There is <u>no requirement</u> for the Contractor to Recycle these Items.</p>
<p>EWC Code</p>		<p>The Contractor shall not reject a load on the basis of <u>the presence of these items.</u></p>	
<p>20 01 01</p>	<p>Newspapers, magazines, office paper, white and coloured, other papers including clean paper bags, Greetings cards, envelopes, including window type, phone Directories, Yellow Pages and similar Directories, junk mail, catalogues and shredded paper.</p>	<ul style="list-style-type: none"> ▪ Paper hand towels ▪ Brown parcel paper free of tape ▪ Paperback Books 	<ul style="list-style-type: none"> ▪ Food contact papers (Fish and chip papers, takeaway containers), ▪ Hardback Books ▪ Wrapping papers
<p>15 01 01 & 20 01 01</p>	<p>Cardboard, grey and OCC, card based egg boxes, domestic cardboard tubes, food packaging card, composite card and plastic,. Cardboard and fibre packing and carrier trays.</p>	<ul style="list-style-type: none"> ▪ Commercial cardboard tubes ▪ Card based commercial food trays and boxes ▪ window envelopes 	<ul style="list-style-type: none"> ▪ Take away pizza boxes
<p>15 01 40 & 20 01 40</p>	<p>Rinsed Steel and aluminium domestic and commercial food and drinks cans, pet food cans</p>	<ul style="list-style-type: none"> ▪ Biscuit tins ▪ Sweet tins 	<ul style="list-style-type: none"> ▪ Bulk domestic and commercial food grade oil cans. ▪ Metal paint tins
<p>15 01 40 & 20 01 40</p>	<p>Aerosols empty of personal and beauty products, cleaning products and foods.</p>		<p>Containers previously used for</p> <ul style="list-style-type: none"> ▪ Car products, ▪ Light lubricating oils, ▪ Domestic and commercial glue ▪ Filler, DIY products. ▪ domestic insecticides

NOTE FOR UTTLESFORD DC: TEEP ASSESSMENT



	Target Materials Residents shall be advised TO present these items Rinsed. The Contractor shall ensure the Recycling of these materials regardless of particle size	Non-Target Materials Residents shall be advised NOT to present these items There is no requirement for the Contractor to Recycle these Items.	Non-acceptable materials Residents shall be advised NOT to present these items There is <u>no requirement</u> for the Contractor to Recycle these Items.
			<ul style="list-style-type: none"> ▪ Paint aerosols
15 01 02 & 20 01 39	Food and drink bottles and jars (including trigger spray bottles, pump spray bottles and roller ball bottles) rinsed of personal care products, household cleaning products, cooking oil and food.	<ul style="list-style-type: none"> ▪ Rinsed Bulk (5 l or greater) containers previously containing cleaning products, ▪ Rinsed Bulk food / liquids containers, (e.g. empty DIY plastic bottles, domestic screen-wash and detergent bottles) 	<ul style="list-style-type: none"> ▪ Domestic and commercial containers previously used for motor oil, antifreeze, brake and clutch fluid and other chemicals.
15 01 02 & 20 01 39	Rinsed Plastic rigid containers including food pots, tubs and trays.	<ul style="list-style-type: none"> ▪ Plastic flower pots, plant trays, CD & DVD cases, ▪ Biscuit and sweet containers, ▪ Plastic coat hangers 	<ul style="list-style-type: none"> ▪ Plastic packaging films, ▪ Black sacks empty or full, ▪ Bubble wrap, ▪ Soft plastic film ▪ Cling Film ▪ Empty Carrier bags ▪ Toys, video tapes, ▪ CDs DVDs, plastic paint pots, ▪ Polystyrene cups and packaging materials, ▪ corrugated plastic sheet, ▪ washing up bowls, ▪ cutlery and drainer trays.
15 01 05	Waxed composite food, beverage and similar containers, including fabric conditioner	<ul style="list-style-type: none"> ▪ Pill etc. Blister packs 	<ul style="list-style-type: none"> ▪ Aluminium composite foil laminate pouches (including for pet foods) ▪ Take away hot beverage containers ▪ Card and aluminium composite take away

NOTE FOR UTTLESFORD DC: TEEP ASSESSMENT



	Target Materials Residents shall be advised TO present these items Rinsed. The Contractor <u>shall ensure</u> the Recycling of these materials regardless of particle size	Non-Target Materials Residents shall be advised NOT to present these items There is no requirement for the Contractor to Recycle these Items.	Non-acceptable materials Residents shall be advised NOT to present these items There is <u>no requirement</u> for the Contractor to Recycle these Items.
			container lids. ▪ All takeaway containers
20 01 40	Rinsed Food grade aluminium foils and aluminium food trays		▪ Food grade Aluminium containing food
19 12 08		▪ Textiles ▪ Shoes	

Additionally, for Uttlesford and for Rochford:

EWC Code	Target Materials	Non-Target Materials	Non-acceptable materials
20 01 02 & 15 01 07	Rinsed Glass food and beverage containers regardless of particle size		▪ Window / sheet glass ▪ Pyrex containers, ▪ Drinking glasses

This is a wide range of recyclables: and this has enabled UDC to remove the bring sites service, delivering greater economy.

The new contract requires a robust sampling methodology (at the time of the procurement this was in the form of the MRF Code of Practice) and also includes clear requirements regarding end markets. Viridor has an internal company VRML which handles the onward sales and transport of the materials recovered from the MRFs which Viridor operates; and this has been in operation since 1998.

To quote from Viridor's submitted Method Statement (which forms part of the contract):

"VRML has the specific responsibility for the development, implementation and management of a long-term national, European and International marketing and sales strategies for all sorted recyclables. Strategies have been developed to efficiently and effectively manage the marketing and associated risks and logistics



over two million tonnes of recyclate per year generated from 26 MRFs (2014/15) and other recycling facilities.

“VRML’s objective is to ensure that quality products generated are positioned and placed within the UK, European and global markets in a timely, professional and balanced manner to ensure the secure, reliable, and environmentally sustainable use of the recyclate. Your recyclates will be embraced within this robust, dynamic marketing strategy.

“VRML operate to international standards under their Management System Accreditation for ISO 14001 EMS, ISO 9001 QMS and OHSAS 18001. They’re also an Environment Agency Accredited Packaging and WEEE Export company and Glass processor. In addition they are one of only a few companies in the UK accredited by the Chinese Export/Import Authorities - AQSIQ & CCIC for export of all Paper, Plastics and metals grade recyclables to China. VRML and our UK, European and international end market reprocessors are subject to continuous rigorous examination and audit trail requirements by the EA, BSI, Customs, AQSIQ, CCIC and other independent auditors.

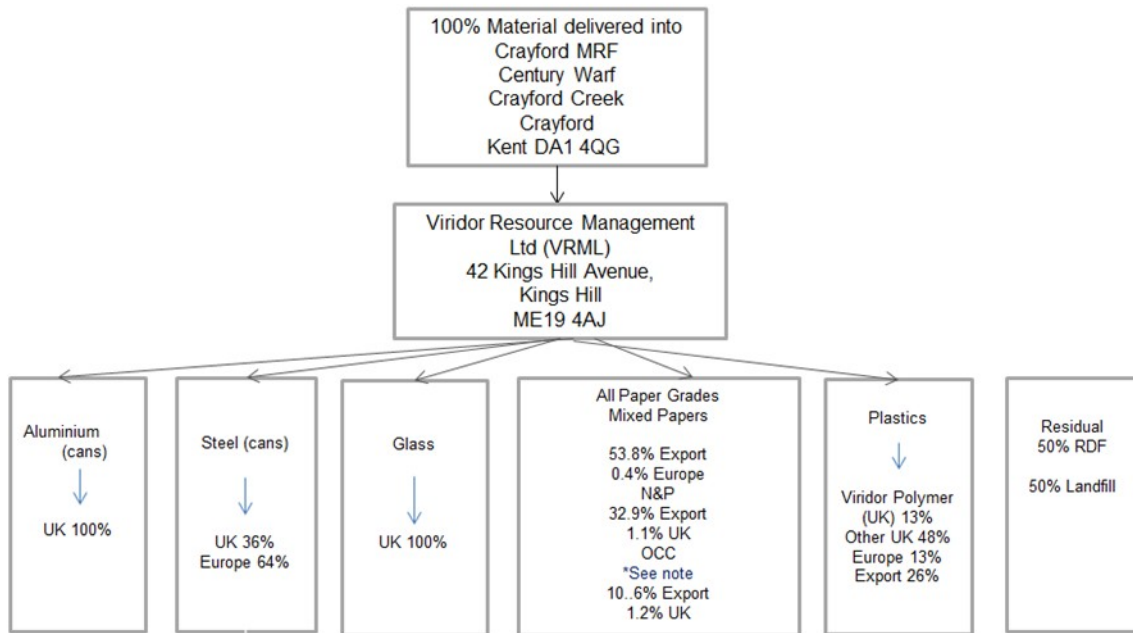
“VRML only use accredited reprocessors. These are carefully vetted under our QMS ‘approved customer process’ and must be approved and licensed in the UK by the EA; or are operating to European standards or similar and appropriately licensed. Maintaining a clear audit trail record on recyclates, their processing and subsequent supply to approved end market reprocessors is an important service and requirement. End market processors are audited under EA issued waste management licenses and accreditations, and by local authority customers in support of ‘duty of care’ and contractual responsibilities.”

The flowchart overleaf shows the end markets from the Crayford MRF where UDC’s recyclate is processed. It can be seen that all glass and aluminium is recycled within the UK and likewise the majority of plastics. 50% of residual waste goes to Energy from Waste plants. As part of the contract, UDC is regularly supplied with data on end markets.

Viridor Resource Management Limited VRML
Example Typical End Destination Locations of Input Materials



Typical End Destination Locations of Input Materials from Crayford MRF July 2013



*Note: OCC – Usual UK outlet Smurfit Snodland closed for refurbishment for 18 months from July 2013
Data taken from material sales March – July 2013
The operating site is responsible for residual disposal not VRML

Figure 1 Material destinations from Crayford MRF



It should be clear that in setting up these arrangements UDC has considered the quality of recycled materials most carefully.

In terms of quantity, there is a good deal of evidence which shows that the chosen methodology recycles much more than could be achieved with separate collections.

Nationally, if one looks at the higher performers, then the highest performer is for a fully co-mingled service (297 kg per household per annum) followed by a two-stream service collecting paper/card separately (260 kg per household per annum). This position does not just hold for the highest performers: it is also true at most quartiles, as shown in Figure 1 below:

Figure 1: Range of Kerbside Dry Recycling Yields (kg/hh) for Each Recycling System

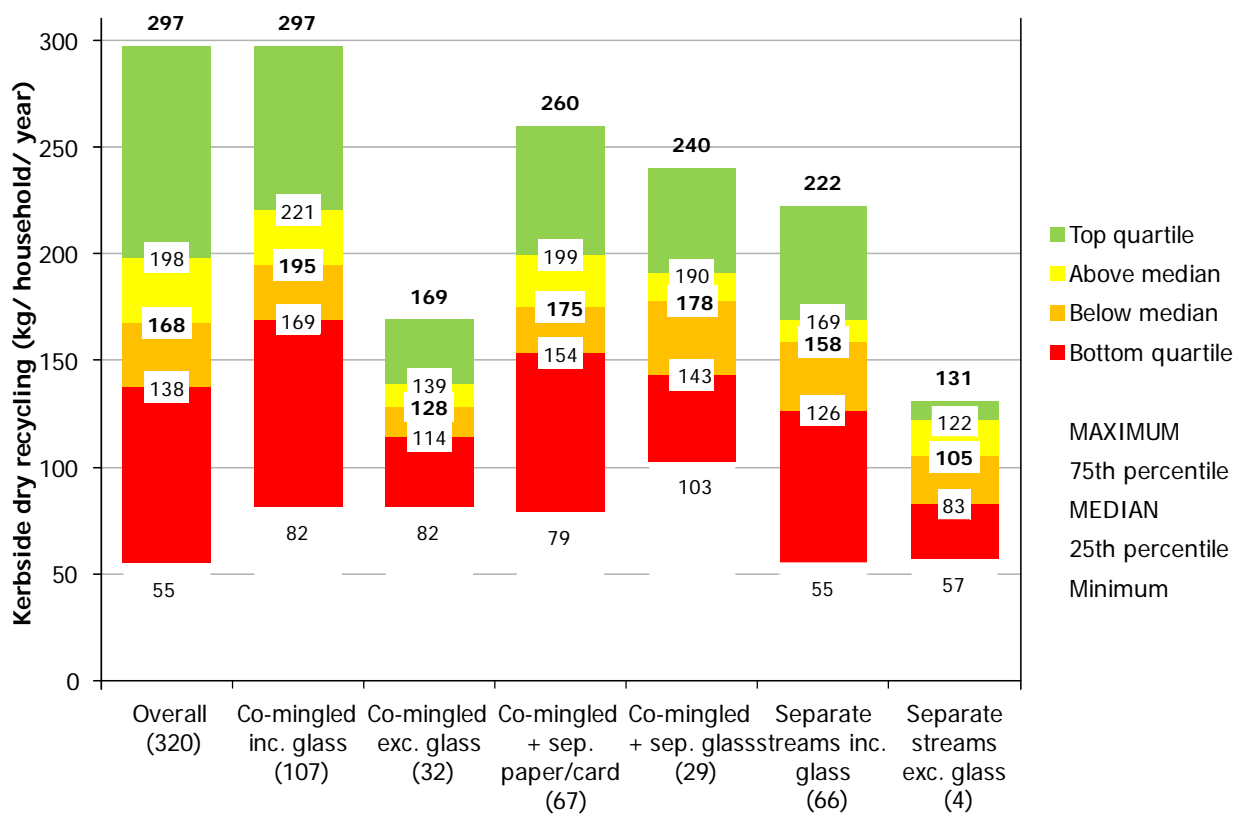


Table 1 overleaf shows that 24 of the top 30 performers collect fully co-mingled dry recyclables; five collect on a two-stream basis, with three collecting paper/card separately and two collecting glass separately; and one authority moved from separate streams to co-mingled including glass during the year; none of this top 30 collects on a kerbside-sort basis.

NOTE FOR UTTLESFORD DC: TEEP ASSESSMENT



Table 1: Collection Details for the Top 30 Kerbside Dry Recycling Authorities in 2014/15

Rank	Authority	WYG client	Kerbside Recycl	Type	% Co-	Recycling				Refuse			
						Freq.	Wheeled	Sacs/ks/	Kerbside	Freq.	Wheeled	Sacs/ks/	Communal
1	Surrey Heath		29	C	99%	F	98%	1%	0%	F	90%	2%	8%
2	South Oxfordshire		29	C	100%	F	96%	4%	0%	F	96%	4%	0%
3	Vale of White Horse		27	C	100%	F	97%	3%	0%	F	97%	3%	0%
4	Chiltern		26	C/p	51%	F	85%	13%	98%	F	87%	9%	4%
5	Windsor and Maidenhead		25	C	98%	W	95%	5%	0%	W	79%	5%	16%
6	Lichfield		25	C	100%	F	100%	0%	0%	F	96%	1%	3%
7	Mole Valley		24	C	100%	F	97%	3%	0%	F	91%	0%	9%
8	Uttlesford		24	C	100%	F	94%	0%	0%	F	99%	0%	0%
9	South Cambridgeshire		24	C/p	75%	F	101%	0%	101	F	101%	0%	0%
10	Waverley		24	C	100%	F	100%	0%	0%	F	96%	2%	2%
11	South Northamptonshire		24	C	100%	F	100%	0%	0%	F	100%	0%	0%
12	Tandridge		24	C	99%	F	98%	2%	0%	F	0%	100	0%
13	Huntingdonshire		24	C	100%	F	89%	12%	0%	F	96%	4%	0%
14	Guildford		24	C	100%	F	95%	5%	0%	F	88%	5%	7%
15	Three Rivers		24	S⇒C	86%	W	100%	0%	0%	F	100%	0%	0%
16	Tamworth		24	C	100%	F	100%	0%	0%	F	100%	0%	0%
17	Ashford		24	C	100%	F	90%	5%	0%	F	88%	6%	7%
18	Epping Forest		24	C/g	76%	F	11%	89%	89%	F	91%	9%	0%
19	Woking		24	C	100%	F	75%	25%	0%	F	77%	3%	20%
20	Melton		23	C	100%	F	94%	6%	0%	F	96%	3%	1%
21	Cannock Chase		23	C	100%	F	101%	0%	0%	F	98%	0%	2%
22	Castle Point		23	C/g	76%	F	0%	100	100	F	0%	93%	7%
23	South Kesteven		23	C	100%	F	94%	6%	0%	F	94%	6%	0%
24	Wychavon		23	C	100%	F	93%	9%	5%	F	93%	5%	3%
25	Rutland		23	C	100%	F	99%	1%	0%	F	97%	1%	3%
26	Stratford-on-Avon		23	C	100%	F	95%	0%	5%	F	93%	5%	2%
27	North Hertfordshire		23	C/p	69%	F	100%	0%	0%	F	90%	0%	11%
28	Central Bedfordshire		23	C(x)	83%	F	72%	16%	12%	F	91%	5%	4%
29	South Staffordshire		23	C	100%	F	99%	1%	0%	F	98%	1%	4%
30	Charnwood		23	C	100%	F	99%	2%	0%	F	99%	2%	0%



Conversely among the bottom 30 performers, 12 out of 30 practice a form of kerbside-sort. It is worth noting also that authorities that have moved from separate collections to either a two-stream or fully co-mingled system (e.g. Ashford, LB Brent, Eastbourne, Isle of Wight, Rother and Wealden) have reported significantly higher capture rates.

In terms of volume, then, the argument runs in favour of moving away from kerbside-sort and toward some degree of co-mingling, either as a two-stream service or a fully co-mingled service.

Second, a pattern whereby higher capture results from either fully co-mingled or two-stream systems can be seen in Table 2 below, which looks at the capture rate at the kerbside for Essex authorities in 2014/15.

Table 2: Collection Details for Essex Authorities in 2014/15

Authority	kg/ household	Collection system for Dry Recyclables	Notes
Uttlesford	248	Co-mingled	W/bin for DMR, fortnightly
Epping Forest	240	Two-stream, glass separate	Sacks for DMR, fortnightly
Castle Point	236	Two-stream, glass separate	Sacks for DMR, fortnightly
Basildon	228	Two-stream, glass separate	Sacks for DMR, fortnightly
Rochford	226	Co-mingled	W/bin for DMR, fortnightly
Brentwood	222	Two-stream, glass separate	Sacks for DMR, weekly
Harlow	207	Co-mingled	W/bin for DMR, fortnightly
Chelmsford	170	Kerbside sort	Sacks for recycling, fortnightly
Maldon	169	Three-stream	Boxes for recycling, weekly
Colchester	166	Kerbside sort	Sacks for recycling, weekly
Braintree	157	Co-mingled exc. glass	Sacks for DMR, fortnightly
Tendring	91	Kerbside sort exc. glass	Boxes for recycling, weekly

There is a lot of evidence to show that the key factors in determining the volumes of dry recyclables collected are:

- (a) choice of system for collecting dry recyclables,
- (b) frequency and container size of residual waste service and
- (c) the degree of affluence.

In Essex the highest performers collect recyclables on either two-stream or fully co-mingled basis, with more affluent districts as well as those with fortnightly residual waste collections at the higher end of the spectrum for weight of recyclables collected per household.

Thirdly, one can look at wider benchmarks: these are detailed in the modelling which follows.



NOTE FOR UTTLESFORD DC: TEEP ASSESSMENT

Uttlesford Yield and Tonnage Estimates for TEEP Analysis

Uttlesford is in the Prospering Southern England ONS group within the Prospering UK Supergroup and has an IMD of 7.94.

It collects recycling fully co-mingled, including glass, fortnightly from wheeled bins and residual waste fortnightly from wheeled bins.

If Uttlesford moved to collecting recycling weekly in separate streams we believe the estimated yields would reduce from 248 to 198 kg/hh/year, meaning some 1,724 tonnes would not be recycled – and this for a weekly collection system:

Uttlesford	Collection type	Recycling container	Residual container	Recycling frequency	Residual frequency	IMD	kg/hh	Tonnes	Households
2014/15 collections and dry recycling yield	Fully co-mingled inc. glass	Wheeled bin	Wheeled bin	Fortnightly	Fortnightly	7.94	248	8,476	34,180
Proposed collections and estimated dry recycling yield*	Separate streams inc. glass	Box	Wheeled bin	Weekly	Fortnightly	13.01	198	6,752	
Change							-50	-1,724	

This is based on the following Prospering UK benchmark authorities with IMD < 16 that collect recycling weekly in separate streams from boxes and residuals fortnightly in wheeled bins.

Authority	ONS Group	IMD	Total (net)
North Somerset	Prospering Smaller Towns	15.18	222
West Oxfordshire	Prospering Smaller Towns	7.76	220
Daventry	Prospering Smaller Towns	12.06	192
Mendip	Prospering Smaller Towns	15.66	178
South Somerset	Prospering Smaller Towns	14.41	175



NOTE FOR UTTLESFORD DC: TEEP ASSESSMENT

If Uttlesford moved to collecting recycling fortnightly in separate streams, we estimate the estimated yields would reduce from 248 to 159 kg/hh/year, meaning 3,050 tonnes would not be recycled:

Uttlesford	Collection type	Recycling container	Residual container	Recycling frequency	Residual frequency	IMD	kg/hh	Tonnes	House-holds
2014/15 collections and dry recycling yield	Fully co-mingled inc. glass	Wheeled bin	Wheeled bin	Fortnightly	Fortnightly	7.94	248	8,476	34,180
Proposed collections and estimated dry recycling yield*	Separate streams inc. glass	Boxes, sacks	Wheeled bin	Fortnightly	Fortnightly	11.64	159	5,426	
Change							-89	-3,050	

This is based on the following Prospering UK benchmark authorities with IMD < 16 that collect recycling fortnightly in separate streams from boxes, and residual waste fortnightly in wheeled bins.

Authority	ONS Group	IMD	Total (net)
West Berkshire	Prospering Southern England	9.98	198
St Albans	Prospering Southern England	7.75	192
Cotswold	Prospering Smaller Towns	10.93	187
Warwick	Prospering Smaller Towns	11.47	168
North West Leicestershire	Prospering Smaller Towns	15.22	166
South Gloucestershire	Prospering Smaller Towns	10.62	162
York	Prospering Smaller Towns	12.93	159
Selby	Prospering Smaller Towns	12.93	159
Harrogate	Prospering Smaller Towns	10.28	152
Cheltenham	Prospering Smaller Towns	15.46	125
Hambleton	Prospering Smaller Towns	10.97	122
Richmondshire	Prospering Smaller Towns	11.18	115



It should be clear, therefore, that UDC has considered the quality and the quantity of recycled material arising most carefully.

Practicability test:

Here the three areas to be addressed are: is the separate collection of each material stream economically, environmentally or technically impracticable?

It should be clear from the analysis above that the chosen system is more environmentally practicable: it recycles significantly more than a system which material streams separately) by an estimated 3,050 tonnes per annum if fortnightly collections remain or 1,724 tonnes per annum if weekly collections were introduced.

There is also an economic benefit to recycling at this level: both to UDC in terms of recycling credits (up to an additional £190,660 per annum based on £62.51 per tonne in the case of fortnightly collections of dry recyclables) and additional payments in terms of the overall recycling / composting rate of £486,601 per annum currently; as well as to the disposal authority Essex CC (calculated as up to a further £144,840 per annum over and above the payments made to UDC, based upon the difference between £62.51 and the treatment costs of ca. £110 per tonne).

Further: at present UDC collects dry recycle from its 34,180 properties on a fortnightly basis using 4.5 rounds with a driver plus two loaders and 0.5 of a round using a driver plus one loader, but also collecting food waste, over a four day cycle. If this were expressed at current (March 2016) rates the cost for collection and treatment could be expressed as:

- Collection resources as described above:
 - 5 drivers at £33,000 per annum: £165,000 per annum including NI and pension costs plus allowances for overheads
 - 9.5 loaders at £28,000 per annum: £266,000 including NI and pension costs plus allowances for overheads
 - 4.5 podded vehicles at £51,000 per annum, plus 0.5 15-tonne vehicles: £260,500 including insurance, fuel etc.
- 8,476 tonnes of dry recycle at £32.90 / tonne gate fee: £278,860
- Recycling credits: 8,476 tonnes @ £62.51 per tonne: (£529,835)
- Net cost of collection and treatment: £440,525



If the recycle was collected as separate streams, and there were still fortnightly collections, UDC would require an arrangement whereby those rounds continued to collect food waste: generally speaking such arrangements (whereby kerbside-sorted materials are collected along with food waste) have a much lower productivity rate because of vehicle capacity; and we would expect the costs to be:

- 6 rounds of driver plus three loaders:
 - 6 drivers at £33,000 per annum: £198,000 per annum including all overheads
 - 18 loaders at £28,000 per annum: £504,000 including all overheads
 - 6 kerbsider vehicles at £45,000 per annum: £270,000
- Income from sale of recyclables:
 - Paper and card: 3,250 tonnes @ £60 per tonne = (£195,000)
 - Cans / plastic: 820 tonnes @ £25 per tonne = (£20,500)
 - Glass: 1,356 tonnes at £15 per tonne = (£20,340)
- Recycling credits: 5,426 tonnes @ £62.51 per tonne: (£339,180)
- Net cost of collection and treatment: £702,180

This increase in cost is stark: an increase in costs of over £250,000 per annum. And it would be more economic even if the gate fee were to increase somewhat.

Additionally, Essex CC makes further savings from the current system (calculated at ca. £145,000 per annum) through the greater diversion from residual waste. Thus the overall saving to the Essex taxpayer from the current system is almost £450,000: as well as diverting significantly more material for recycling with obvious environmental benefits.

Further: if UDC were only to recycle at this lower level the supplementary payments from Essex CC would reduce sharply – and the option might be then to collect dry recyclables weekly which would be much more expensive and (as our modelling shows) would still not achieve the level of dry recycling which the current system achieves.

It should be clear that the current system has been chosen because it is seen as more technically practicable, environmental and economic than collecting the four materials separately.



Step 5

At this stage sign-off is required.

We recommend that this assessment should be formally approved by the appropriate Council Committee or other authority; and retained as a formal record.

This report constitutes a review (Step 6 in the Route Map), appropriate for the new treatment contract UDC has entered into (the contract with Viridor, which started in May 2015); an additional review should take place just prior to the end of that contract (expected to be May 2019) or whenever waste services are generally reviewed, whichever is the earlier.

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