NOTE FOR MID KENT WASTE PARTNERSHIP (ASHFORD BC, MAIDSTONE BC & SWALE BC): TEEP ASSESSMENT

INTRODUCTION

Mid Kent Waste Partnership (MKWP) comprises the Waste Collection Authorities of Ashford BC (ABC), Maidstone BC (MBC) and Swale BC (SBC).

During 2011 and 2012 MKWP procured a contract for the provision of waste collection and street cleansing services. The contract was procured using the Competitive Dialogue (CD) process and WYG provided technical support to MKWP for the procurement. The procurement process also involved extensive working with the Waste Disposal Authority, Kent CC (KCC).

WYG's involvement with MKWP began after the initial Descriptive Document and other contract documentation for the initial (Outline Solutions) stage had been drafted; and after Pre-Qualification Questionnaires had been received.

The contract documentation states that:

> 'ABC, MBC and SBC have been working in partnership with KCC to identify and implement cost effective waste collection/processing/disposal and street cleansing services within their respective Administrative Areas. Whilst this contract relates to the provision of collection and street cleansing services the purpose of the joint working and therefore this contract is to minimise the combined WCA/WDA cost impact of collection/ street cleansing/ waste processing and disposal and improve recycling performance in so far as it is cost effective to do so.'

Thus, although the objectives of the contract were primarily financially focused, there was a clear desire to improve upon the recycling/composting rates that were currently being achieved by each partner. At the time of WYG's appointment the latest figures available were for 2010/11 and these were:

- Ashford: 13.64% (and in the bottom 10 performers) for dry recycling;
- Maidstone: 19.34% for dry recycling, 32.32% for recycling/composting; and
- Swale: 29.04% for dry recycling, 31.78% for recycling/composting.

In 2011/12, Maidstone's rate had improved to 22.92% for dry recycling and showed an underlying trend of 31%; and for recycling/composting the figure was 45.23%. Swale's performance was around the same

level; but Ashford's performance of ca. 14% for dry recycling was such that it was the lowest performer in England.

At the commencement of the procurement the methodology for collecting waste was as set out in Table 1 overleaf:

Table 1

	Ashford	**Maidstone**	**Swale**
Residual waste	Weekly, black bag	Fortnightly, 190-l wheeled-bins	Fortnightly,240-l wheeled-bins
Garden waste	No system for collection	Fortnightly, chargeable	Fortnightly, chargeable
Dry Recyclables	Fortnightly, kerbside sort from boxes: paper, glass, textiles, cans	Fortnightly, wheeled-bins co-mingled: paper, card, plastics, cans; glass not collected	Fortnightly, wheeled-bins co-mingled: paper, card, plastics, cans, foil; glass from an insert in the bin

As part of the procurement, MKWP considered a number of different methodologies for collecting waste in the future: indeed, this was one of the reasons that the CD procedure was used. Indeed the preferred collection methodology identified at the initial (Outline Solutions) stage was not the one finally chosen.

MKWP was, during the procurement, 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.

MKWP was also, during the procurement, 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 is can be shown that it is not should technically, economically or environmentally practicability (TEEP).

Accordingly, through the procurement, each of the options for collecting recyclables was considered and tested using TEEP criteria: although no official guidance as to how this was to be done was available during the procurement process.

In late April 2014 (the contract was awarded in the autumn of 2012) WRAP circulated its Waste Regulations Route Map. WYG was asked by MKWP to check the TEEP tests carried out and assess its chosen methodology on the basis of this Route Map.

THE PROCUREMENT PROCESS

The initial design of the CD process was to use four stages as follows:

- Outline Solutions stage;
- Detailed Solutions stage;
- Refined Solutions stage; and
- Final Tender stage.

Seven private sector organisations (Biffa, Enterprise, Focsa, Kier, Serco, Sita and Veolia) submitted Outline Solutions submissions; and these represent the major suppliers which provide waste and recycling collections to councils in the UK, meaning that there was good engagement in the process by industry.

At Outline Solutions stage bidders were invited to bid for the contract on the basis of alternative methods of collection of dry recyclables, as follows:

- The PCM was for a two-stream collection system, with paper collected as a separate stream;
- Bidders were also invited to submit other proposals i.e. alternative options for collection: and a number of the bidders proposed a fully co-mingled option.

The procurement process did not include for the treatment of the dry recyclables collected: the design of the contract was that all waste collected would be delivered to, and subsequently managed by, KCC as waste disposal authority.

Following receipt and evaluation of tenders and considering the costs (i.e. economic factors), the proposed methodology of the contractors (i.e. technical factors) and the likely outcomes in terms of the headline recycling/composting rate (i.e. environmental factors) the Partnership decided upon the following service configuration:

- Alternate-weekly collection of residual waste from wheeled bins;

- Alternate-weekly collection of dry recyclables from wheeled-bins, fully co-mingled including glass; but with the alternative of keeping the glass separate by using an insert in the top of the wheeled-bin;
- Weekly collection of food waste; and
- Fortnightly collection of garden waste on a chargeable basis.

It should be noted that the collection of kerbside-sorting segregated dry recyclables had been discounted during the procurement process on the grounds of technical, economic and environmental practicability. Once the final tenders were received and evaluated it was clear that there was a further benefit, in terms of environmental and economic performance, in choosing the fully co-mingled option for the collection of dry recyclables: and this is the methodology now adopted within MKWP.

Thus a TEEP test was undertaken, although there were at the times no formal guidelines as to how this was to be undertaken.

As far as the non-separation of glass is concerned, Lord de Mauley's letter of October 2013 was clearly not available at the time.

USING THE WRAP ROUTE MAP

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

Step 1

Here MKWP 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 not as separate waste streams.

Bring sites continue to be used to collect additional materials in Maidstone and Swale: but they are being withdrawn in Ashford from October 2014 as the tonnages collected are small.

The Route Map also refers to the collection of food and garden waste: the system collects the garden waste streams on a chargeable basis; and food waste as a separate waste stream.

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

The costs and waste composition were known at the time of the procurement.

Step 2

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

Residual household waste is not currently recycled: but there is recovery through the Allington EfW facility.

Dry recyclate collected is all recycled, except for fines and contaminants.

Viridor, who provide the MRF for the treatment of co-mingled dry recyclables, have excellent processes for managing quality, dealing with contamination and producing high quality recyclables. Details of this, which were considered as part of the procurement of this part of the arrangement, are included within Appendices A-D.

Garden waste collected separately is treated for composting and food waste collected separately is also treated through appropriate processes. Bulky waste is also recycled where it can be.

Materials from bring sites are (apart from contaminants) also recycled.

Step 3

Step 3 relates to the waste hierarchy: which has been applied throughout the process.

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 MKWP collect glass, metal, paper and plastic for recycling? Yes

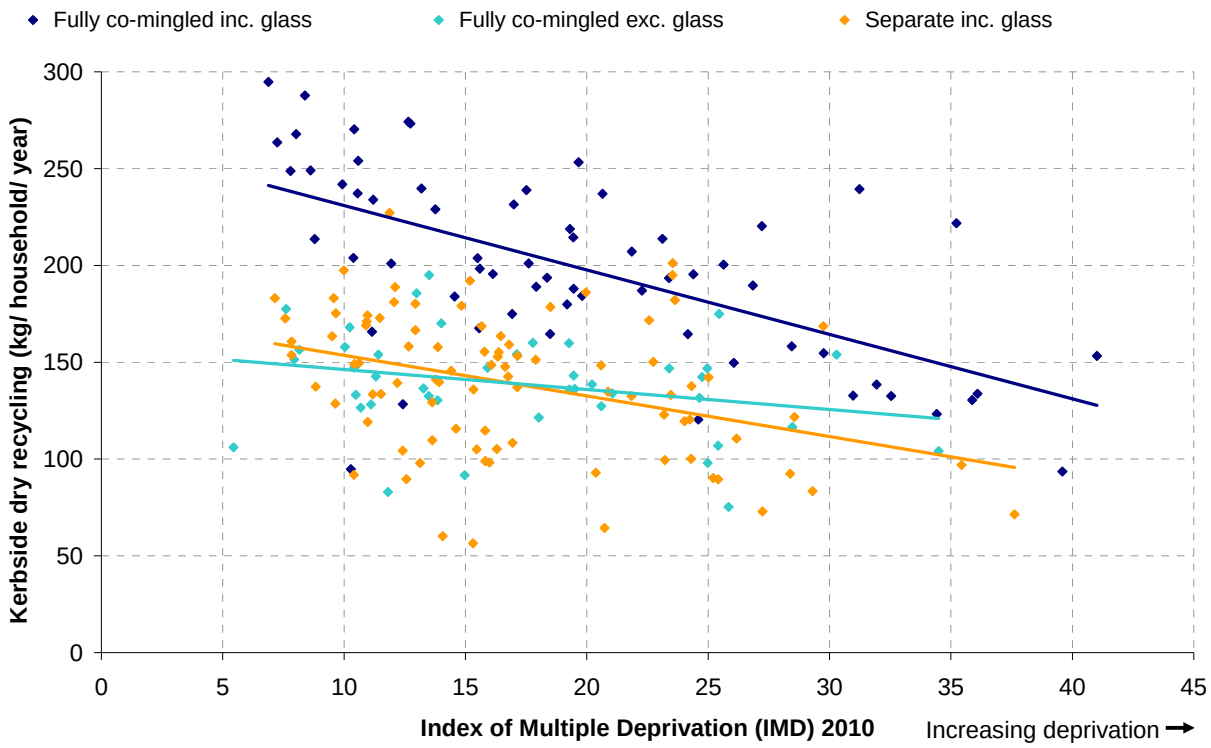
- Are separate collections in place? No (so necessity and practicability questions to be answered)
- Are separate collections necessary to ensure that waste is recycled? No – waste collected for recycling is (apart from contaminants etc.) recycled: and contamination is very low e.g. in the first quarter of 2014/15 the rejection rate was 2.98% in Ashford, 3.43% in Maidstone and 3.48% in Swale.
- Is there an approach to separate collection that is technically, environmentally and economically practicable? Yes – as the following tests show

Necessity test:

Here the quality and quantity of recycling is considered. In terms of quantity, MKWP considered carefully evidence supplied by WYG, which showed that:

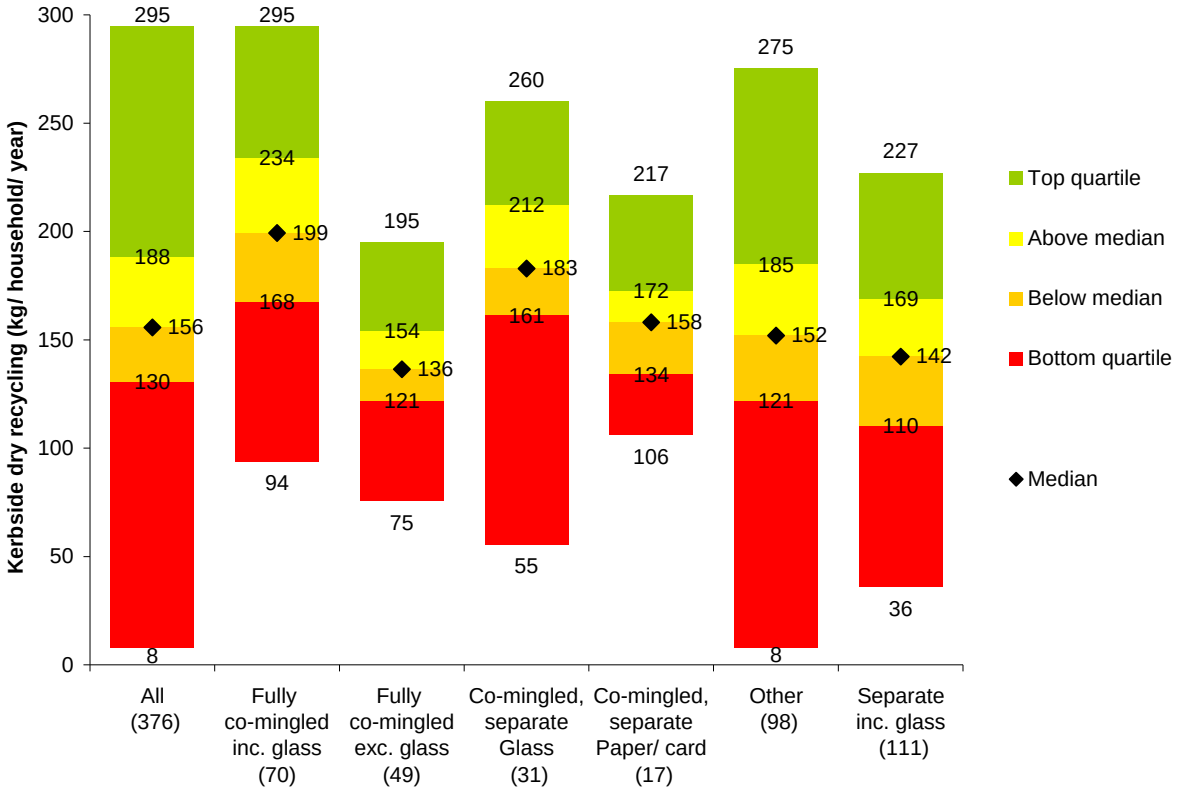
- There is a direct relationship between the index of multiple deprivation and recycling rates as shown in Figure 1 below.

Figure 1



- If one looked at the higher performers nationally for dry recycling, then the highest performer was for a fully co-mingled service (295 kg per household per annum).
- This position did not just hold for the highest performers: it was also true at all quartiles, as shown in Figure 2 below:

Figure 2



- MKWP also noted that containing the dry recycling in a wheeled-bin gave benefits in terms of street cleansing standards.

MKWP's ultimate decision did not just relate to quantity: but it was a significant factor in choosing the current system. Officers continued to note performance levels nationally; and the 2011/12 figures tell a similar story which supports the decision. Table 1 overleaf shows that 20 of the top 30 performers collect fully co-mingled dry recyclables, and five collect on a two-stream basis collecting glass separately: whereas only one of this top 30 (North Somerset) collects on a kerbside-sort basis.

Table 1: Collection Details for the Top 30 Kerbside Dry Recycling Authorities in 2011/12

Rank	Authority	WYG client	Kerbside Recycling kg/hh/yr	Type	% Co-mingled	Recycling				Refuse			
						Freq.	Wheeled Bins	Sacks/ Other	Kerbside Boxes	Freq.	Wheeled Bins	Sacks/ Other	Communal
1	South Oxfordshire	·	310	C	100%	F	96%	4%		F	90%	4%	5%
2	Surrey Heath	·	291	C	100%	F	98%	1%		F	89%	2%	8%
3	Vale of White Horse	·	282	C	100%	F	97%	3%		F	91%	3%	7%
4	Windsor and Maidenhead		276	O	76%	W	100%			W	85%	5%	10%
5	Lichfield		267	C	100%	F	100%		0%	F	96%	1%	3%
6	Elmbridge	·	263	C	100%	F	96%		4%	F	88%	4%	8%
7	Mole Valley	·	263	C	100%	F	85%	16%		F	85%	10%	6%
8	Rochford		261	C	99%	F	99%			F	100%		0%
9	South Kesteven		258	C	100%	F	100%			F	100%		
10	North Somerset	·	255	S	0%	W			92%	F	83%	8%	8%
11	Castle Point	·	253	C/g	77%	F		100%	100%	F		100%	
12	Epping Forest	·	253	C/g	78%	F	5%	95%	95%	F	91%	3%	5%
13	Tamworth		252	C	100%	F	100%			F	100%		
14	Cannock Chase		250	C	100%	F	100%			F	100%		0%
15	Rutland		249	C	100%	F	99%	1%		F	96%	1%	3%
16	Stratford-on-Avon		249	C	100%	F	96%		4%	F	94%	4%	2%
17	South Cambridgeshire		249	C/p	66%	F	100%		0%	F	95%	0%	4%
18	West Oxfordshire	·	245	O	26%	W	5%		95%	F	94%	1%	5%
19	Basildon	·	244	C/g	78%	F		93%	98%	W		90%	9%
20	Wychavon		241	C	100%	F	90%	10%	7%	F	90%	7%	3%
21	Huntingdonshire	·	240	C	100%	F	88%	12%		F	92%	4%	5%
22	Woking	·	239	C	100%	F	93%	7%		F	86%	4%	10%
23	North Kesteven	·	238	C	100%	F	99%			F	99%		
24	Mid Sussex		237	C	100%	F	99%			F	99%		
25	South Holland		234	C	100%	W		100%		W		100%	
26	Caerphilly		232	C	100%	W	71%	1%	27%	W	98%	2%	
27	Charnwood		231	C/g	88%	F	98%	2%	98%	F	98%	2%	

28	Guildford	▪	231	O	17%	W	8%	9%	83%	F	86%	9%	6%
29	Central Bedfordshire		230	C/g	82%	F	72%	16%	12%	F	91%	5%	4%
30	Spelthorne	▪	229	C	100%	F	94%			F	89%	0%	11%

Conversely (as noted in WYG's report available via the WYG website) among the bottom 30 performers the reverse is true – 25 out of 30 practice a form of kerbside-sort. It is worth noting also that:

- Whilst the bottom 30 authorities include examples where collection and capture of dry recyclables might be challenging (Orkney Islands, Eilean Siar); it also includes, in bottom place, Ashford.

- In addition to MKWP moving to the chosen co-mingled system, a number of the other low-performers from the bottom 30 of 2011/12 (e.g. LB Brent, Eastbourne, Isle of Wight, Rother and Wealden) have since abandoned kerbside-sort and report 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: which were the two methodologies included as options in the final tender documentation.

Some further evidence that is more specific may be gained from analysis of the post-implementation results, particularly at Ashford but also in Maidstone and Swale.

Since introducing the new system, the results are as follows:

- In Ashford for the 9 months since the new services were in July 2013, thee performance is 32.24% recycling and 21.52% composting giving total performance of 53.76%, an exponential increase from the figures pre contract. A further way of looking at the dry recycling performance is that the capture rate for the first quarter of 2014/15 amounted to 56.28 kg per household collected at the kerbside; and if this was repeated for the rest of the year the annual figure would be 225kg per household. As can be seen from the table above this would move Ashford into upper-quartile performance; and it represents a very significant improvement in performance from the 63kg per household of dry recycling collected at the kerbside in 2011/12.

- Maidstone has current performance of 26.21% recycling and 19.80% composting (average since August 2013) giving total performance of just over 46%. As with Ashford it is useful to consider the capture rate: and for the first quarter of 2014/15 this was some 52.1kg per household collected at the kerbside; and if this was repeated for the rest of the year the annual figure would be 208kg per household, which is upper quartile performance. If one looks at Maidstone's family group and councils within it that collect dry recycling using kerbside-sort methodology, one can calculate (from 2012/13 data, the latest available for all authorities) that Maidstone's capture rate would be only 178 kg per household if it practiced kerbside-sort; and the increase of 30kg per household means that, through dry recycling alone, an additional 2,010 tonnes was diverted from the residual waste stream, delivering a saving of ca. £180,000 per annum in treatment costs.

- Swale's current average since the introduction of the new services equates to 27.38% recycling and 12.43% composting giving total performance of 39.81%. As with Ashford it is useful to consider the capture rate: and for the first quarter of 2014/15 this was some 56.5kg per household collected at the kerbside; and if this was repeated for the rest of the year the annual figure would be 226kg per household, which is upper quartile performance. If one looks at Swale's family group and councils within it that collect dry recycling using kerbside-sort methodology, one can calculate (from 2012/13 data, the latest available for all authorities) that Swale's capture rate would be only 163 kg per household if it practiced kerbside-sort; and the increase of 63kg per household means that, through dry recycling alone, an additional 3,820 tonnes was diverted from the residual waste stream, delivering a saving of ca. £340,000 per annum in treatment costs.

As far as the quality of dry recyclables is concerned, the MRF provider (Viridor) produces regular statistics showing the degree of contamination within the dry recyclable stream collected by MKWP: to give a typical example, in June 2014 of 3,298.02 tonnes delivered to the MRF on behalf of MKWP, only 122.39 tonnes (3.71%) was not recycled. To enable this, Viridor has good processes within their MRF that is used for this contract: a statement on their position regarding recyclate quality together with details of sampling methodologies and a sample report are all attached as Appendices A-D.

It should be clear that MKWP has considered the quality and 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?

Fundamentally, MKWP has engaged with industry and taken advice from its technical adviser in order to collect recyclables in the most economic, environmental and technically practical fashion that it can. Indeed, the whole procurement was carried out with no fixed ideas as to how recyclables were to be collected – save that the Councils wished to:

- In economic terms, use a system which collects waste in a manner which is as economical as possible, while also maintaining high quality.

- Also in economic terms, use a system whereby recycling could be increased in terms of the overall recycling rate and in the range of materials that could be collected at the kerbside and recycled, but at an economic cost.

- In environmental terms, increase the recycling rate and reduce the volume of residual waste (working in conjunction with the WDA).

- In environmental terms, reduce the number of vehicle passes and carbon emissions generally: and to evaluate tenders in that regard.

- In terms of technical practicability, to constantly seek the views of potential service providers and to evaluate these, taking into account cost and performance as described above.

- In terms of technical practicability, to seek the views of Members and Officers, as well as considering data from other authorities, so that the collection system is practical for residents to use and to participate in as much as possible.

The results of this process, importantly including the evaluation of tenders received, have led to the chosen system being chosen because it is seen as more technically practicable, environmental and economic than

other systems. The tender that was accepted and which included this methodology for collection was the most economically advantageous solution; and additionally gave significant savings to all partners.

Further: the higher performance which results from this arrangement reduces the volumes of residual waste: which increases recycling credits paid to the waste collection authorities of Ashford, Maidstone and Swale by KCC; and, over and above the payments made by KCC to the waste collection authorities, reduces overall costs to KCC.

Step 5

At this stage sign-off is required.

Although the decision made in terms of the final service configuration was approved by each Council as part of the contract award, and had involved the Heads of Service and legal representatives (as recommended in the Route Map) it is felt that this updated assessment should also be formally approved; and retained as a formal record.

LA/WYG/8.14

APPENDIX A

Viridor Position on Recycling Collections and Recyclate Quality

Viridor Transforming waste™

Viridor Position on Recycling Collections and Recyclate Quality.

This position statement is designed to provide our clients and partners with an update on recent regulatory amendments transposing the requirements of the European Waste Framework Directive, and on recent guidance regarding recycling collections, 'TEEP' and materials recycling quality testing.

As one of the UK's leading providers of recycling, renewable energy and waste management services, Viridor works with a large number of local authorities and businesses to effectively and responsibly manage society's resources and wastes. Viridor is committed to a relentless pursuit of quality in recycling. We continue to receive, process and market recyclate materials from many types and variations of collection system across the UK.

Viridor provides services for both pre-segregated and commingled collections, and our approach to producing quality recyclates remains second to none. Our MRF sorting operations have in place extensive quality control systems which guarantee high quality outputs, and which fully comply with the 'MRF Code of Practice' (The Environmental Permitting (England & Wales) (Amendment) Regulations 2014). We sell recycled commodities that meet the challenging demands and materials specifications of an established network of client reprocessors in the UK and globally.

Viridor welcomes the clarity provided by the recent regulatory amendments – both those referred to above, and the Waste (England & Wales) (Amendment) Regulations 2012 concerning collection system requirements. Supporting guidance on the latter is provided by WRAP in England and by Welsh Government. The outcome clearly allows for the continued delivery of essential recycling collections for households and businesses in a pragmatic manner through the assessment and application of technical, environmental and economic practicability ('TEEP') principles. The choice of collection systems remains as it should with local authorities and businesses to best suit their needs.

It remains clear that commingled collections of some materials for recycling remain a valid and fully legal option for local authorities and businesses, based on being able to demonstrate that they will achieve high quality recyclates, and where it can be shown that they offer clear technical, environmental, economic and practicable advantage over separate collections.

Viridor Transforming waste™

It is essential to continue the drive towards higher levels of UK recycling using convenient, flexible and cost-effective collection systems for customers, which also encourage high levels of participation. There should of course be a continued focus on the production of high quality recycled commodities to meet demanding market specifications from reprocessors in the UK and beyond, and both commingled and separate collection systems are capable of achieving this.

In order to ensure that collections of household waste are not only efficient to operate, but designed to capture greater quantities and types of materials for recycling, many local authorities are implementing commingled collection systems for mainly paper, plastic, card, ferrous metals, aluminium and glass. Providing that the appropriate necessity and practicability testing is conducted, and that the evidence of these assessments is recorded, then local authorities remain free to choose appropriate collection and recycling systems to suit their local needs.

Viridor will continue to work alongside its clients to ensure that the relentless pursuit of quality in recycling is maintained, helping the UK to recycle more and to continue to divert materials and unwanted goods away from landfill.

Additional Information:

Viridor operates 26 Material Recycling Facilities (MRFs) to produce high quality recovered materials that can be remanufactured by production industries. Viridor's Crayford MRF is currently one of the largest and most advanced in Europe handling around 350,000 tonnes of mixed recyclables per year. Additional state-of-the-art facilities produce a total of 1.8 million tonnes of dry recyclates that are traded every year.

Maintaining the highest product quality to meet demanding end-user specifications and export requirements is essential. This is directly related to input quality and therefore to collection systems and effective complementary service communications. All feedstock that enters the MRF must be in a form (dry, loose, un-compacted materials) that can be adequately sorted through the process equipment. Viridor manages the inputs through pre-defined input specifications and a rigorous sampling and analysis routine of the incoming recyclate as it is delivered. Additional sampling during the transit of materials through the MRF further ensures that a high quality output is achieved.

This sampling regime identifies trends and improvements or decreases in individual material stream quality. Feedback to relevant parties is key to continued improvement of recyclate quality, MRF performance and output quality. Viridor therefore places strong emphasises on clear information and education with its local authority and business customers.

Demonstrable quality assessment and control on MRF inputs and outputs allow Viridor to supply high quality products to meet the demands and specifications of manufacturers and reprocessors who wish to use the recyclate. The company has supported the development of the 'MRF Code of Practice' which will further help to demonstrate that modern well-managed MRFs produce high quality products.

It should also be noted that most pre-segregated or 'kerbside-sorted' materials also go through additional sorting or processing prior to being utilised by reprocessors or manufacturers. This is required to ensure quality of product. Viridor will also maintain the same level of quality controls on all materials it handles from these collection methods, as it would for commingled materials.

Viridor has its own well-established specialist marketing, sales and logistics company (Viridor Resource Management Ltd) for the development, implementation and management of a long-term UK, European and international marketing and sales strategy for all processed recyclables generated from Viridor and its client facilities throughout the UK. Viridor is therefore well placed to continue supplying high quality materials and also to maintain and improve its recycling capacity and MRF facilities in relation to market drivers.

For further information please contact communications@viridor.co.uk

APPENDIX B

Viridor Draft Sampling and Input Material Acceptance - Verification Testing & Processing

Draft Sampling and Input Material Acceptance - Verification Testing & Processing

Status: DRAFT
Approved By: [Manager]
Issue Date: [Publish Date]
Issue Number:1
Start Date: 12/06/2014
Review Plan: 12 Months

Introduction and Purpose

The purpose of this procedure is to ensure the effective analysis and monitoring of input materials against material input specifications and to assist in compliance with MRF Code of Practice requirements.

Refer to Procedure X.X.XX MRF Code of Practice Sampling Procedure for additional information
This procedure will be reviewed when necessary by Viridor when legal and operational requirements change.

Roles and Responsibilities

RACI	Role	Notes
Responsible	*Wayne Buchan*	
Accountable		
Consulted	Stuart Wood, Veekram Mohabeer, Laura Brown	
Informed		

Unit Managers are responsible to ensure that employees are sufficiently trained and competent to carry out the tasked required in line with the requirement that are set within the Regulations and Viridor procedures.

It is the responsibility of all QAC staff to follow this procedure, wear the correct PPE and report any near miss which may arise as a result of this process.

Terms and Definitions

Definitions

QAC	Quality Analysis and Control Department
Target Materials	Recyclable materials recoverable through processing
Contamination	Non-recyclable material, Offensive waste, Clinical waste, organics
Non-Recyclable Materials	Waste material that is not capable of being recycled.
Non Target Material	Material that is capable of being recycled but is not a target

	material at the Mrf.
Sampling trend analysis sheet	The on-going record kept of sampling data which provides an overview of the data
Downgrading	A load sampled and found to be outside of the customers input specification but deemed as suitable for processing by Viridor.
Rejection	A load that is deemed unsuitable for processing due to the gross level of contamination or contains substances hazardous to health/ plant/ machinery.
Minimal and safe sorting	Sorting of obvious gross contamination or oversize objects from the load using machinery and/or PPE (gloves and litter pickers.
Commodity	Material type
'Weightron' system	Automated data recording system linked to scales

Vehicles arriving on site

1.1. The Weighbridge Operator will notify the QAC department of a load arriving on site.

1.2. The loading shovel driver will clear enough space for the load to tip and scrape the floor to prevent cross contamination of materials. The loading shovel driver will then signal the delivery driver where to tip.

1.3. The relevant person appointed to take the sample will proceed to a safe area of the tipping hall and maintain a safe distance of 5m minimum from moving plant and vehicles.

1.4. The QAC operative will take photos of the vehicle with the doors shut showing the registration and of the vehicle ejecting the load.

1.5. Delivering drivers should be instructed accordingly by site staff to ensure that all material is tipped in a controlled environment in accordance with the Site permit.

1.6. The sample is only to be taken from the relevant load being ejected to ensure that no cross contamination from other customer materials that have been delivered are included in the sample. N.B. contractual agreements may apply to how and where samples are to be taken (i.e. inside building only) refer to specific customer appendix for details.

Input Sample collection

2.1 Once the vehicle has tipped the QAC operative will take appropriate photos as detailed in contract specific appendix.

2.2 Any large items of contamination should be removed from the load by applying a 'minimal and safe sorting' approach and should be photographed. Contaminants segregated from the material pile shall be sent to rejects and not form part of the sampling analysis or process feed stock.

2.3 Upon visual inspection if the load looks to be high in contamination or contains materials that pose risk to machinery or human health, the QAC operative will instruct the loading shovel driver to quarantine the load pending sample results and/or inspection. The site Supervisor/Manager will also be notified.

2.4 Waste that is not acceptable within the restrictions of the Environmental Permit or Exempt Activity will be deemed as Non-compliant. In this situation you should notify the Site Supervisor or Manager and Refer to Unit Emergency Plan /Abnormal situation/Non-Compliant waste before deciding how to handle the material

2.5 Samples must be taken at random or as determined by code of practice. This can be achieved by separating a proportion of the material (approximately four times greater than the required sample size) and lifting it up and dropping it back on the floor at least twice using a loading shovel. The sample must be taken from different parts of the load each time to avoid repeated capture of material from the same household.

2.6 The shovel driver will take a suitable quantity of material to meet the sample size requirements and tip directly into the container from an estimated height of 1 meter above the sample container if safe to do so, whilst maintaining a safe 5m distance from the pedestrian QAC operative.

2.7 The sample size will be a minimum of 240 litres collected in the appropriate container for the relevant customer(refer to customer appendices)and should weigh approximately 20kg (Unless incorporating a Code of Practice sample then 60kg will be taken).

2.8 Once the loading shovel has retreated to a 5M distance and the bucket has been lowered to the floor, the Shovel driver will instruct the QAC operative to collect the sample and take it to the QAC area.

Input Sample Analysis

3.1 Prior to any sampling taking place the sampling container should be weighed on the weighing scale to determine weight of the sample prior to any sorting. The combined weight of sorted materials is to be cross checked with the original sample weight.

3.2 To meet code of practice requirements, an allowance of up to 5% variation between the starting sample weight and the combined weight of the sorted material deems the sample as an acceptable.

3.3 Before emptying the material from the sampling container onto the sorting table, make sure the sorting table is clear of any previously sorted materials. All sampling vessels should also be empty and placed in correct positions. The floor around the QAC area should also be swept clean of any loose material.

3.4 The sample container must be mechanically lifted where possible or lifted by a minimum of 2 people and tipped out on to the sample sorting table or tipped in several smaller manageable portions.

3.5 The whole sample will be sorted and segregated into the standard Viridor Categories

3.6 The full analysis of the sample will be used to provide data for material evaluation in line with the customer material input specification. The data for COP samples will be summarised by the Weightron programme as reported data in line with the code of practice to be presented as Target, Non Target and Non-Recyclable.

3.7 The smaller materials will then be tipped onto a sort screen ensuring no loss of material from the sides. It is required that a maximum size steel mesh of 45mm x 45mm should be used. Material on top of the mesh will be further sorted in to the correct categories and the remaining material which has fallen through the screen will go in to a container to be weighed.

3.8 Each commodity of material shall be weighed separately and recorded directly on to the 'Weightron' system and a manual record should be kept as a backup for input into a sampling trend analysis spread sheet.

3.9 A visual second check should be completed of each material stream before the weight is recorded to ensure the segregation of materials is correct and matches the category being recorded.

3.10 The Weighbridge ticket, QAC sample analysis sheet/Weightron analysis printout (where installed) must be kept together when the sampling has finished and given to the relevant person to check the information ready for data input into the sampling trend analysis sheet.

3.11 At the end of the sample all material shall be cleared from the sampling area in preparation to the next sample.

3.12 If the combined contamination level is above the contractual input specification limit, the QAC supervisor will inform the site administration /supervisor who will in turn notify the customer of any non-conformance.

3.13 Any paper that has moisture content above the naturally occurring 10%, will be classed as wet paper (see EN643 standards). A probe can be used to determine moisture content, however a visual inspection is sufficient if the paper has degraded to the point where it is unlikely to be successfully recovered by the sorting system therefore unfit for recycling.

3.14 In the event of a load being rejected it must be quarantined and the customer will be contacted by telephone in line with contractual requirements or as soon as is reasonably practicable to arrange an inspection.

3.15 In the event of a load being downgraded if tipped before 15:00 the customer will be sent a non-conformance /Downgrading sheet by 17:00. Downgraded loads tipped after 15:00 will be notified to the council no later 12:00 the following working day (unless stated otherwise within the customer contract).

3.16 Downgraded or rejected loads accepted over weekends or Bank holidays will be notified to the customer no later than 12:00 on the next normal working day. Rejected loads will still be quarantined and available for inspection (unless stated otherwise within the customer contract).

3.17 Any query of QAC results raised by local authorities should be communicated back to Viridor within 3 working days (unless stated otherwise within the customer contract agreement). Remedial action to be communicated within 5 working days (unless stated otherwise within the contract agreement)

Following the sample analysis

4.1 Sample results will be communicated to the MRF Supervisor as soon as possible

4.2 The sample materials will be returned to the appropriate location for processing or disposal dependant on material commodity.

4.3 While containers are being removed or delivered back to the QAC department, all QAC operatives must maintain a **5m** safe working distance from Mobile Plant.

4.4 The sample collection containers must be cleaned on a minimum of a weekly basis. Vessels should be maintained in a good condition and damaged ones replaced.

4.5 Data input in to the sampling trend analysis sheet should be completed by 12pm on the day following the sample being taken.

4.6 Monthly reports can be issued directly from the Weightron system if agreed and should be generated and sent to local authority(ies) to compare results with the QAC sampling sheets sent from each downgraded load.

4.7 Where possible if an analysis printout system is installed to the Weightron sampling system, ensure a printout of the sample analysis accompanies the handwritten QAC sampling sheets.

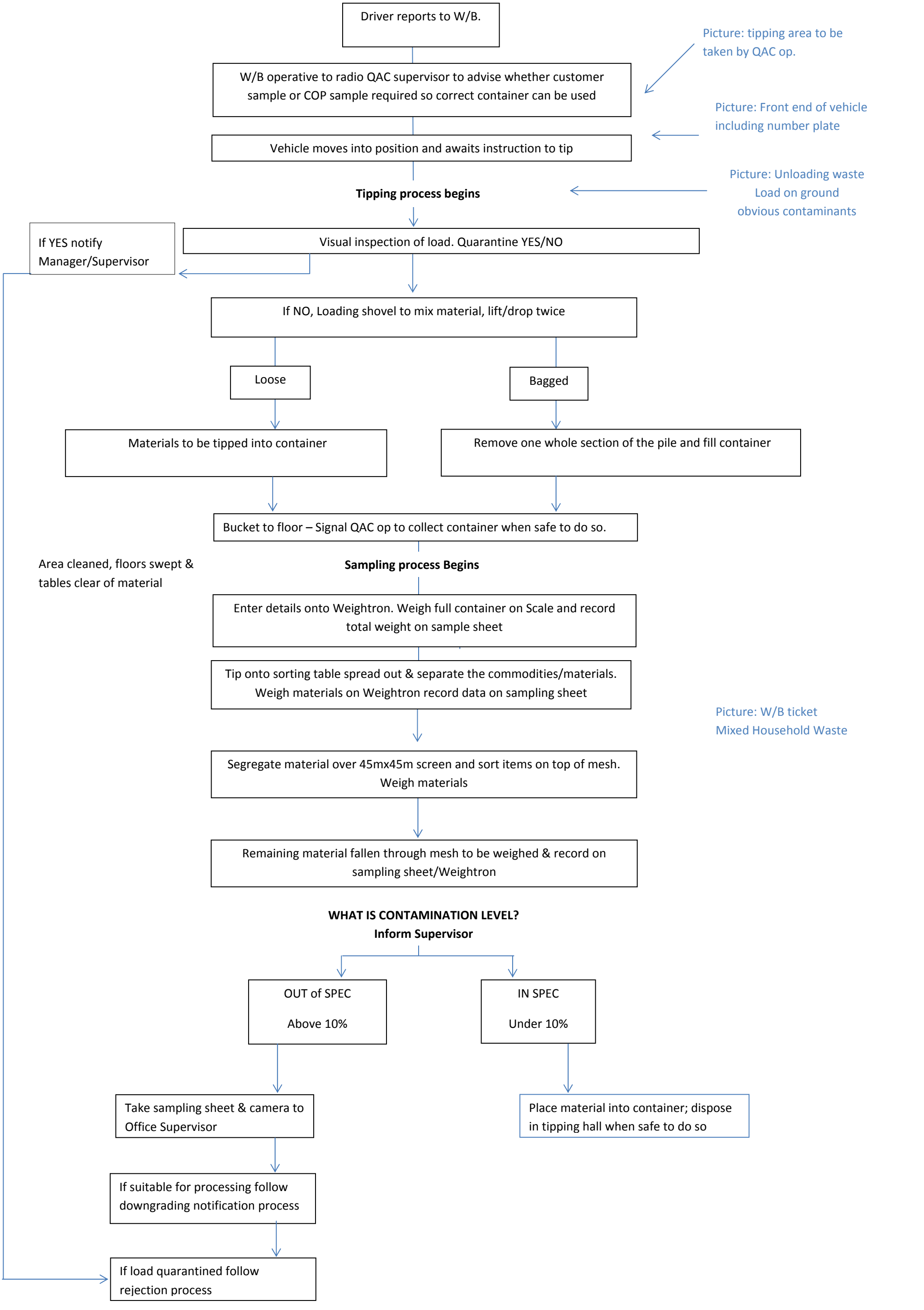
Document control

END

APPENDIX C

Customer Sampling Analysis

Appendix 1 - Customer Sampling analysis



APPENDIX D

KCC Dry Recyclate Processing - June 2014 Summary

KCC Dry Recyclate Processing - June 2014 Summary

		Total (tonnes)	Accepted (tonnes)	Rejected (tonnes)	Recycled (tonnes)	Residual (tonnes)	Recycled (%)	Residual (%)	Destination of Residual	
									EfW	Landfill
LOT 1 Dry Recyclate with co-mingled glass	Allington	1,250.18	1,250.18	0.00	1,218.55	31.63	97.47%	2.53%	0%	100%
	Ashford	976.56	976.56	0.00	928.22	48.34	95.05%	4.95%	0%	100%
	Sittingbourne	1,071.28	1,071.28	0.00	1,028.86	42.42	96.04%	3.96%	0%	100%
LOT 2 Dry Recyclate (no glass)	Pepperhill	909.30	909.30	0.00	891.66	17.64	98.06%	1.94%	0%	100%
	North Farm	71.90	71.90	0.00	71.69	0.21	99.71%	0.29%	0%	100%
	Dunbrik	503.38	503.38	0.00	497.19	6.19	98.77%	1.23%	0%	100%
Total		4,782.60	4,782.60	0.00	4,636.17	146.43	97.52%	2.48%	0%	100%

KCC Material Received as percentage of Total Input **16.34%**

TICKET DA	PRODUCT DESCRIPTION	CUSTOMER	CONSIGNEE NAME	CONSIGNEE ADDRESS	CONSIGNEE COUNTRY UK	Grand Total
Jun						
	MIXED COLOUR GLASS RESIDUALS 0 - 50 MMFROM A MATERIALS RECYCLING FACILITY(with some fines)	**DAY GROUP LTD T/A DAY AGGREGATES**			**3,619.22**	
			DAY AGGREGATES LTD (GREENWICH DEPOT)			
				MURPHY'S WHARF LOMBARD WALL CHARLTON, LONDON SE7 7SH	3,619.22	
	MIXED COLOUR GLASS RESIDUALS 0 - 50 MMFROM A MATERIALS RECYCLING FACILITY(with some fines)	**SILICA DEVELOPMENTS LIMITED**			**491.98**	
			SILICA DEVELOPMENTS LTD			
				ALBION ROAD, SHOREHAM PORT, DOCK GATE NO.3, SOUTHWICK, BRIGHTON, EAST SUSSEX BN42 4ED	491.98	
	MIXED COLOUR GLASS RESIDUALS 0 - 50 MMFROM A MATERIALS RECYCLING FACILITY(with some fines)	**GLASS RECYCLING (UK) LTD**			**2,516.20**	
			GLASS RECYCLING (UK) LTD			
				418 CARLTON ROAD CARLTON BARNSLEY S YORKS S71 3HX	2,516.20	
	MIXED COLOUR GLASS RESIDUALS 0 - 50 MMFROM A MATERIALS RECYCLING FACILITY(with some fines)	**RECRESCO LTD.**			**1,101.76**	
			RECRESCO LTD			
				MANOR WAY, SWANSCOMBE, KENT DA10 0LL	1,101.76	
						7,729.16
	UNPROCESSED MIXED GLASS CONTAINERS	**SHEFFIELD GLASS PLANT 85TS**			**14.32**	
			SHEFFIELD GLASS PLANT 85TS			
				SALMON PASTURES ATTERCLIFFE ROAD SHEFFIELD, SOUTH YORKSHIRE S4 7WT	14.32	
						14.32
	HDPE CLEAR BOTTLES BALED	**VIRIDOR POLYMER RECYCLING LTD**			**313.58**	
			VIRIDOR POLYMER RECYCLING			
				GERRARD PLACE EAST GILLIBRANDS SKELMERSDALE LANCASHIRE, WN8 9SF	313.58	
	HDPE CLEAR BOTTLES BALED	**CLOSED LOOP RECYCLING LIMITED**			**73.42**	
			CLOSED LOOP RECYCLING LIMITED			
				16 CHOATS ROAD DAGENHAM ESSEX RM9 6LF	73.42	
						387.00
	MIXED PLASTIC BOTTLES BALED B GRADE50% POLYSORT	**ROYDON POLYTHENE (EXPORTS) LTD.**			**20.72**	
			ROYDON GROUP PLC			
				UNIT 1 & 3, JUNCTION BUSINESS PARK RAKE LANE, SWINTON MANCHESTER M27 8LR	20.72	
	MIXED PLASTIC BOTTLES BALED B GRADE50% POLYSORT	**ECO PLASTICS LIMITED**			**43.10**	
			ECO PLASTICS LTD			
				HEMSWELL BUSINESS PARK HEMSWELL LINCOLNSHIRE DN21 5TU	43.10	
	MIXED PLASTIC BOTTLES BALED B GRADE50% POLYSORT	**HANBURY PLASTICS RECYCLING LTD**			**162.78**	
			HANBURY PLASTICS RECYCLING LTD			
				STOKE WORKS, REDHILLS ROAD, MILTON, STOKE ON TRENT ST2 7PS	162.78	
						226.60
	ALUMINIUM CANS BALED	**ALERIS RECYCLING (SWANSEA) LTD.**			**199.54**	
			ALERIS RECYCLING (SWANSEA) LTD.			
				PO BOX 38 WAUNARLWYDD WORKS WAUNARLWYDD SWANSEA SA5 4YG	199.54	
	ALUMINIUM CANS BALED	**NOVELIS UK LIMITED**			**17.46**	
			MASON METALS			
				TWOWOODS LANE BRILEY HILL DY5 1TA	17.46	
						217.00
	PET BOTTLES CLEAR BALED	**VIRIDOR POLYMER RECYCLING LTD**			**556.54**	
			VIRIDOR POLYMER RECYCLING			
				GERRARD PLACE EAST GILLIBRANDS SKELMERSDALE LANCASHIRE, WN8 9SF	556.54	
						556.54
	RECOVERED PLASTIC BAGS - BALED - ETHYLENE POLYMER GRADESGATE FEE £25	**MONOWORLD LTD. EAWML 75205**			**92.12**	
			MONOWORLD LIMITED			
				MONOWORLD BUSINESS PARK RUSHDEN ROAD SHARNBROOK BEDFORDSHIRE, MK44 1NB	92.12	
						92.12
	GLASS AGGREGATE - PROCESSEDDECONTAMINATED CRUSHED AND GRADEDGLASS SAND 0 - 4 MM PRODUCED UNDER A	**SILICA DEVELOPMENTS LIMITED**			**383.20**	
			SILICA DEVELOPMENTS LTD			
				C/O R COLLARD, ALDERSHOT RECYCLING FACILITY, GOVERMENT ROAD, ALDERSHOT, HAMPSHIRE GU11 2DX	383.20	
	GLASS AGGREGATE - PROCESSEDDECONTAMINATED CRUSHED AND GRADEDGLASS SAND 0 - 4 MM PRODUCED UNDER A	**LONDON ROCK SOUTHERN LIMITED**			**44.22**	
			LONDON ROCK SOUTHERN LIMITED			
				UNIT 5, DELTA COURT MANOR WAY BOREHAMWOOD HERTS. WD6 1FJ	44.22	
	GLASS AGGREGATE - PROCESSEDDECONTAMINATED CRUSHED AND GRADEDGLASS SAND 0 - 4 MM PRODUCED UNDER A	**PROSPECT MATERIALS LTD**			**16.48**	
			PROSPECT MATERIALS LTD			
				PROSPECT HOUSE 5 HIGH ROAD BYFLEET SURREY, KT14 7QH	16.48	
						443.90
	STEEL/TIN COATED CANS - BALED	**AMG RESOURCES LIMITED**			**53.62**	
			AMG RESOURCES LTD (LLANELLI)			
				NEVILLS DOCK LLANELLI SA15 2HD	53.62	
	STEEL/TIN COATED CANS - BALED	**MORRIS & CO. (HANDLERS) LTD.**			**51.70**	
			MORRIS & CO. (HANDLERS) LTD.			
				BANKWOOD LANE ROSSINGTON DONCASTER S. YORKS., DN11 0PS	51.70	
	STEEL/TIN COATED CANS - BALED	**JEREMY FREETH T/AS THAMESDOWN RECYCLING**			**24.47**	

		THAMESDOWN RECYCLING			
			KINGSHILL RECYCLING CENTRE CRICKLADE SWINDON WILTS, SN6 6JR	24.47	
STEEL/TIN COATED CANS - BALED	**EPS MATERIALS RECOVERY LTD.**			**107.04**	
		EPS MATERIALS RECOVERY LTD.			
			GRAIGOLA WHARF KINGS DOCK SWANSEA SA1 8QT	107.04	
					236.83
RECOVERED PLASTIC BAGS - BALED - ETHYLENE POLYMER GRADESFOC DELIVERED	**PLASRECYCLE LIMITED**			**40.72**	
		PLASRECYCLE LTD.,			
			NATHAN WAY THAMESMEAD LONDON SE28 0AE	40.72	
					40.72
RECOVERED PLASTIC BAGS - BALED - ETHYLENE POLYMER GRADESFOC	**PLASRECYCLE LIMITED**				
		PLASRECYCLE LTD.,			
			NATHAN WAY THAMESMEAD LONDON SE28 0AE	70.34	
					70.34
				10,014.53	**10,014.53**

		CONSIGNEE COUNTRY									
TICKET DATE	**PRODUCT CODE**	**CN**	**DE**	**FR**	**HK**	**ID**	**KR**	**NL**	**IN**	**ES**	**Grand Total**
Jun											
	PAPNO.7	5,361.80							197.76		5,559.56
	PAPOCCBL	504.42									504.42
	PLSHDPLS				30.42						30.42
	PLSMXPLBBLB50SRT				440.28						440.28
Jun Total		**5,866.22**			**470.70**				**197.76**		**6,534.68**

KEY:	
CN	CHINA
DE	GERMANY
FR	FRANCE
HK	HONG KONG
KR	KOREA
NL	NETHERLANDS
IN	INDIA
ES	SPAIN

PAPNO.7	MIXED PAPER
PAPNO.8	NEWS AND PAMS
PAPOCCBL	OCC (CARDBOARD)
PLSHDPLS	HDPE
METSTCANS	STEEL CANS
PLSHDPECL	HDPE CLEAR
PLSMXPLBBLB50SRT	MIXED PLASTIC BOTTLES
PLSPETCL	PET CLEAR

Crayford Health & Safety and Environment Agency Assesment Record

Month	Minor	RIDDOR	Total
Jun-14	1	0	**1**
Jul-14			
Aug-14			
Sep-14			
Oct-14			
Nov-14			
Dec-14			
Jan-15			
Feb-15			
Mar-15			
Apr-15			
May-15			

	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
Environmental Agency (EA) Compliance Assesment Reports (CARs) received	n/a											
Health and Safety Executive (HSE) Improvement and Prohibition Noticed under RIDDOR for the Provider`s Sorting Facility(ies)*	n/a											

* Where appropriate, Action Plan to rectify non-conformance will be attached