
Southend-On-Sea Borough Council - Note Regarding Service Delivery Options

B032659
October, 2021

PRESENTED TO

Southend-on-Sea Borough Council

Civic Centre
Victoria Avenue
Southend on Sea
Essex SS2 6ER

PRESENTED BY

Tetrattech

The Pavillion 1st floor
Botleigh Grange Office
Campus
Hedge End
Southampton
SO30 2AF

Prepared by:

Date

Reviewed by:

Len Attrill
Project Director

Date

Authorized by:

Len Attrill
Project Director

Date

1.0 INTRODUCTION

The Council procured its current contract for recycling, waste and street cleansing services during 2013 and 2014. The contract as procured: started on 5 October 2015; expired on 30 March 2031 (subject to a Council only right to extend up to 18 months); was subject to a Council only break notice which, if served allowed the Council to end the contract on 4 October 2023 but subject to that notice being withdrawn at any time before 4 October 2023 with the contractor's agreement. The contract included for significant investment in infrastructure, in particular a new transfer station at Eastern Avenue, which has been delivered.

The design of waste collection services as set out in the contract and as currently delivered, is as follows:

- Weekly collection of residual waste from sacks;
- Weekly collection of mixed dry recyclate (glass, cans, cartons and plastic containers/packaging) from pink sacks;
- Weekly collection of paper/card from boxes;
- Weekly food waste collection; and
- Chargeable garden waste service with weekly collections from wheeled-bins.

This service design has delivered a recycling/composting rate which, until 2019/20, had increased incrementally over the years to 46.8%. This is slightly higher than the national average in England of 45.5% and just below the top quartile compared to other English unitary authorities (placed 31st from 91 unitary authorities reporting in 2019/20). Similarly, SSBCs recycling and composting performance (including HWRC and bring site tonnage) amongst unitaries is above average with SSBC ranked 29th and 33rd respectively from 91 unitary authorities.

Compared to similar unitary authorities – those of the same rurality and deprivation classification¹ ('2: predominately rural, lower deprivation') – SSBC's overall performance is the third highest (Bournemouth, Poole & Christchurch is the highest at 53.9%): see Table 1 below. Recycling/reuse diversion and composting are both above average compared to similar unitaries, with recycling/reuse diversion the fourth highest in the benchmark group (Swindon has the highest diversion). It is worth noting that in Bournemouth, Poole & Christchurch, Bromley and in Reading residual waste is collected fortnightly; but for others it is collected weekly. This makes SSBC's performance particularly creditable.

Table 1: Recycling/composting performance in 2019/20 – Southend & other Unitary Authorities (in ascending order of overall diversion)

Authority	Overall diversion %	Recycling/reuse %	Composting %
Bournemouth, Poole & Christchurch	53.9	32.2	21.7
Bromley	50.9	28.0	22.9
Southend	46.8	27.3	19.6

Medway	46.0	25.8	20.2
Swindon	42.8	32.8	10.0

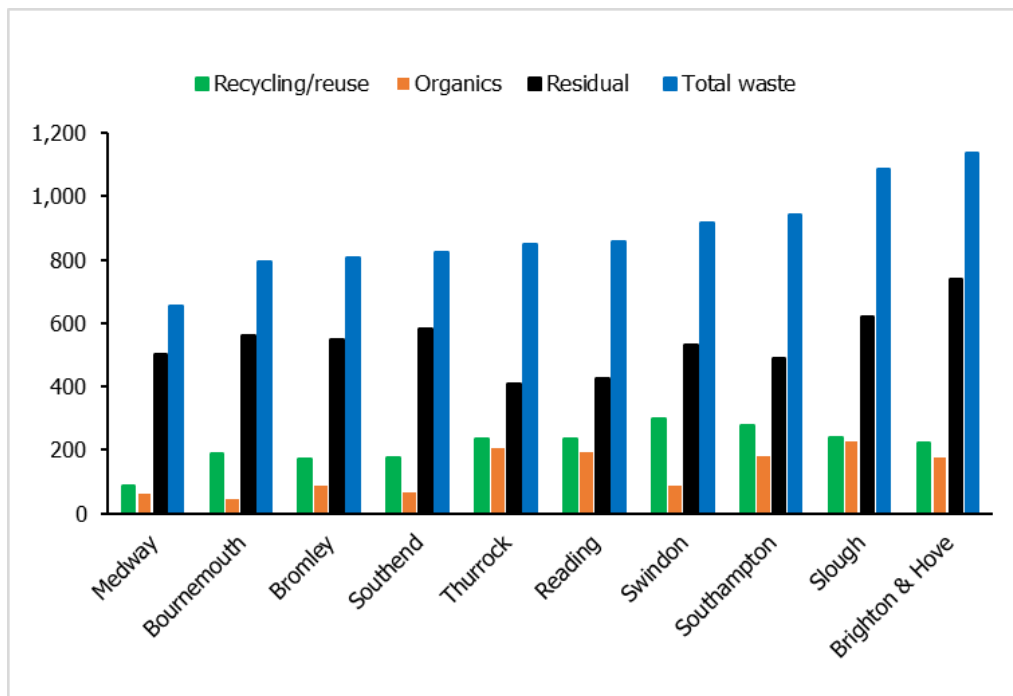
¹ Rurality classification: a six-part classification developed by WRAP combining rurality and deprivation level

Reading	35.3	23.9	11.4
Thurrock	34.8	19.4	15.4
Brighton & Hove	29.4	24.1	5.3
Southampton	29.3	21.5	7.8
Slough	24.0	13.7	10.3
<i>Average</i>	<i>39.3</i>	<i>24.9</i>	<i>14.5</i>

A similar picture emerges when examining a wider benchmark group, which includes waste collection authorities with the same rurality classification: Southend's overall performance, recycling and composting diversion are all above average. In this scenario, overall performance is ranked 6th from 19 authorities, with Rochford achieving the highest diversion at 61.3% (but note, over half of this comprises garden/food waste, which, as noted earlier is collected together and for free and Rochford's recycling % performance is actually lower than Southend's). Basildon, Eastbourne and Slough, like Southend, operate weekly residual waste collections; others are fortnightly.

Looking at overall waste arisings indicates that SSBC residents generated an average amount of total household waste in 2019/20 compared to other unitary authorities of the same rurality and deprivation classification or similar index of multiple deprivation (IMD), (Figure 1, source: DEFRA reported data). However, residual waste is the third lowest amongst the benchmark group (probably as a reflection of the sack service), while recycling and compostables yields are both above average (both fourth highest amongst the benchmark group).

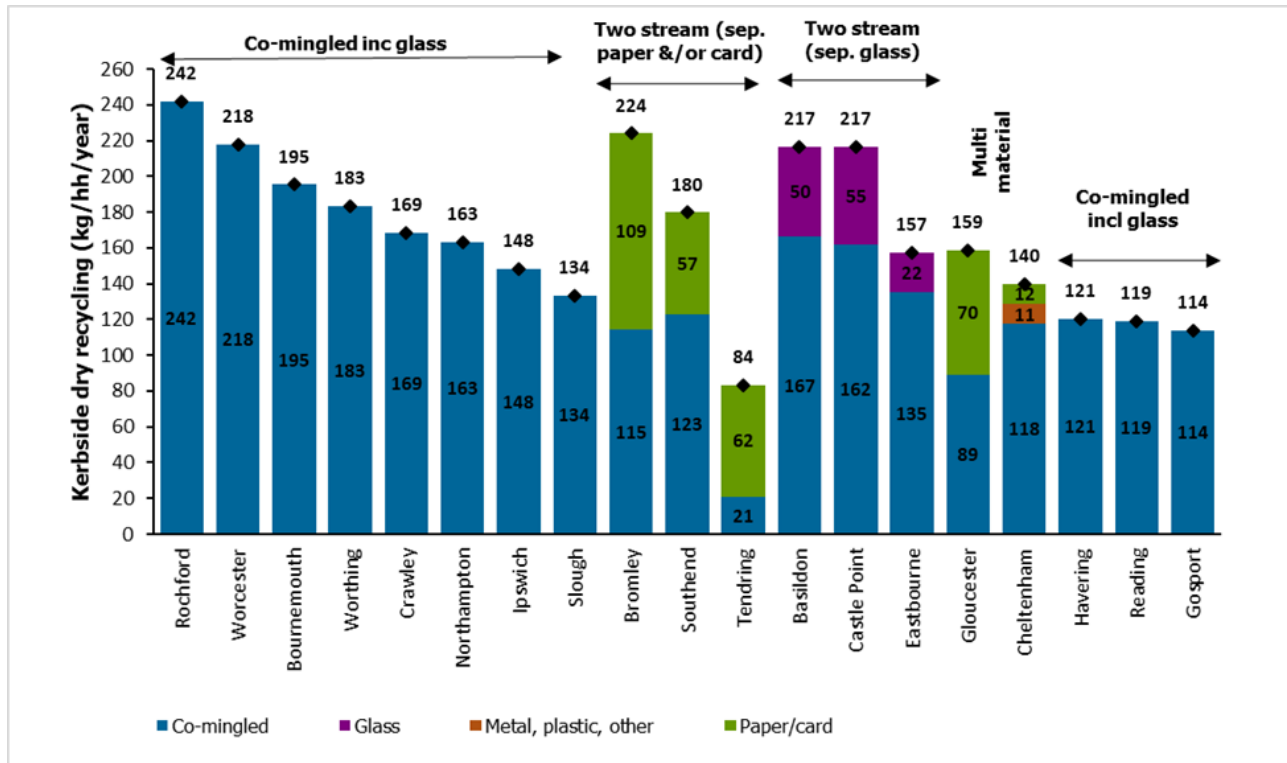
Figure 1: Total Waste Yields by Material Type: Southend & similar unitary authorities (2019/20: in ascending order for total waste)



Examining kerbside recycling in more detail indicates that, despite the Council achieving above average diversion for overall recycling/composting performance, its kerbside performance is in the bottom 50% compared to all UK authorities and those of the same rurality according to WRAP’s Local Authority Portal². In addition, it is in the bottom 25% compared to those in the same region in terms of total kerbside dry recycling yield. It is interesting to note that SBC’s performance in relation to paper/card yield at the kerbside is in the bottom 25% compared to all authorities, whether comparing across the UK, those in the region or by rurality classification.

A further benchmarking exercise, looking at those authorities with the same rurality classification as Southend, indicates that, from a total of 19, seventeen local authorities are operating some form of co-mingled collection, either fully co-mingled or two-stream (with paper or glass separate): Figure 2. This suggests that that Southend’s kerbside yield is average amongst those authorities operating a two-stream system, with paper and/or card collected separately, at 180kg/hh/year (WRAP LA Portal data, 2017/18). LB Bromley achieves the highest diversion for a kerbside scheme collecting paper/card separately, at 224kg/hh/year, with the paper/card yield almost double that captured in Southend (but NB Bromley collects residual waste fortnightly, which may explain at least some of the difference). The highest performing authority operating a fully co-mingled system is Rochford capturing 242kg/hh/year, while the average yield for this benchmark group is 182kg/hh/year, slightly higher than Southend’s performance.

Figure 2: Kerbside Recycling Yields for 'Rurality 2' & WRAP benchmarks 2017/18



² <http://laportal.wrap.org.uk/>

Southend’s waste current performance can be summarised as follows:

- Overall division is above the national average for English unitaries;
- Recycling/composting diversion is above the national average and when compared to benchmarks;
- Overall waste arisings are average, while residual waste is low;
- Kerbside dry recyclate diversion is in the bottom 50% compared to all UK authorities and bottom quartile compared to those in the same region;
- Kerbside dry recyclate diversion is above average when compared with authorities operating similar two-stream schemes.

This suggests that the Council is probably achieving a diversion rate almost as high as can be achieved with the current waste collection schemes. In order to deliver a step-change in performance the following could be introduced:

- Reduction in the frequency for residual waste collections;
- Fully co-mingled collections of dry recyclate alongside weekly food waste and chargeable garden waste.

Our modelling suggests that by changing kerbside schemes to an alternate-weekly scheme collecting residual waste and a fully co-mingled mix could increase Southend’s overall diversion to between 55.7% and 62.5%. This is our best

prediction using current data: although at this point in time it is difficult to predict whether the increased tonnages observed during the past year through three national lockdowns will translate into higher tonnages going forward.

As explained below, this design is approved by Government and by DEFRA and WRAP.

For the Council to introduce a change in system as soon as possible – which the Council wishes to do for reasons described below – the quickest and lowest risk way would be to instigate this change under the existing contract with Veolia. Through this methodology the Council could see a new system introduced from October 2023: whereas if the contract were reprocured we estimate that the change could not happen until autumn 2024 at earliest and more likely until the spring or summer of 2025.

2.0 UNFORESEEN EVENTS

2.1 CLIMATE CHANGE EMERGENCY

In response to the gathering global awareness of a climate emergency, in September 2019 the Council declared a Climate Emergency including committing to action to achieve net-zero carbon by 2030. Those factors and imperatives to take effective action only came to the fore in the last two-year period and so post the procurement and conclusion of the contract. Those factors and the Council's net zero carbon declaration in 2019 are considered to be circumstances that have brought about a need to modify the design of the waste collection services (as set out in 1.0 of this note) and are circumstances which a diligent contracting authority, like the Council, could not have foreseen at the time of the procurement and entering into the contract. In order to respond to these factors and meet the need to lower carbon emissions by modifying, the proposed modifications must have time to become effective by 2030. As such, the proposed modifications would need to be place within the next two years.

To lower carbon emissions for waste services the most obvious actions are, first, to increase the level of diversion of waste from residual waste and to achieve a higher recycling/composting rate; and second, to reduce the number of waste collection vehicle movements. Extensive analysis has shown that both could be achieved by reducing the frequency of residual waste collection from weekly to fortnightly. The proposed modifications would introduce this change.

A second action, taking into account analysis of the dry recyclate collected as well as the requirement to increase the capture of dry recyclate, would be to collect dry recyclables fortnightly on a fully co-mingled basis. The proposed modifications would also introduce this change.

Under the proposed modification, both dry recyclables and residual waste would be presented in wheeled-bins.

It is worth saying that the lockdown imposed as a result of Covid-19 has had significant effects on increasing the volume of household waste: and particularly increasing the volume of residual waste., These effects are expected in some measure to remain and so reducing the frequency of the collection of residual waste and containing it in a wheeled-bin would help to counter these effects of Covid 19, which in itself was a unforeseen circumstance.

A proposed reduction in waste vehicle movements would achieve a carbon saving of 529 tonnes per annum, both through a reduction in the number of vehicles from 23 to 21 and fewer vehicle movements. The vehicles will be new vehicles and the introduction of alternative fuel for those vehicles also has a positive impact.

The proposed new service design is calculated to achieve a diversion of 6,457 tonnes per annum from residual waste (with an increase in food waste of 2,352 tonnes per annum, an increase in garden waste of 1,733 per annum and an increase in dry recycling of 3,923 tonnes per annum); and in addition to improving the Council's recycling/composting rate, this is estimated to generate a carbon saving of 8,368 tonnes per annum (including savings from having the vehicles fuelled by hydrogenated vegetable oil in place of diesel). This is the equivalent of taking 4,650 cars from off of the road.

To make these changes would be a challenge: and the best way to introduce these service changes in an effective way would be to bring them in as soon as is practically possible and at the lowest risk of disruption to the quality and continuity of service. The assessment is that these imperatives could be achieved if the current contractor Veolia introduced them from 2023.

2.2 FAILURE OF TOVI ECO PARK – MECHANICAL BIOLOGICAL TREATMENT (MBT)

The procurement, the contract and the specification (which is incorporated into the contract) contemplated that disposal of the Council's residual waste for the duration of the contract was to be undertaken at a MBT plant at Basildon (Tovi Eco Park) operated by Urbaser Balfour Beatty (Waste) Ltd (hereinafter referred to as UBB) under contract with Essex County Council (ECC). The plant treats residual waste by reducing its mass, biodegradability and recovering recycling. The remaining output can be landfilled or used to generate energy in a separate facility. The specification requires delivery of an annual minimum tonnage of residual waste to the facility (in excess of 25,000 tonnes). From the outset the facility suffered from severe operational and commissioning problems. It is understood that the Council's residual waste has not been delivered to the facility since 2015.

Those extensive difficulties led ECC to begin proceedings in 2017 arguing that UBB failed to design and construct the facility so that it was capable of passing the acceptance tests. In September 2020, the Judge ruled in ECC favour with the result that the Court has ruled that the facility cannot operate and function as it was intended.

The MBT plant has not accepted any waste from any source since June 2020 and the operator has gone into receivership. It is unclear if the facility will ever be operational to receive any of the Council's residual waste.

Clearly, at the time of the Council's waste services procurement it was expected that this facility would have been open for the duration of that contract, contributing to increasing recycling/recovery and reducing carbon impact for the Council.

Since some of this waste would have seen recovery (from the MBT treatment process) equating to some 2,081 tonnes in 2019/20 or ca. 3.25% of the total waste arisings for the Council, the closure of the plant means a potential increase in residual waste going to landfill and hence a carbon increase of 916 tonnes per annum; and given the Council's policy on carbon, this exacerbates the need to change the design of waste services as described above and hence the proposed modifications.

The failure of the facility has therefore brought about a need to modify the contract in order to change the services method of residual waste collection and introduce more flexibility into the means/location of disposal. It is not considered that a diligent contracting authority like the Council could have foreseen the circumstances of serious design and operational failure, leading to the facility's indefinite closure, the ensuing litigation, resulting in a court decision that the facility was not fit to meet its design purpose.

2.3 RESOURCES AND WASTE STRATEGY & THE ENVIRONMENT BILL

In December 2018 (and so again after the procurement and entering into the contract) the Government published its Resources and Waste Strategy setting out how the U.K. will preserve material resources by minimising waste, promoting resource efficiency and moving towards a circular economy in England. Complying with this Strategy is a circumstance which brings about the need to modify the waste and recycle collection service and was not capable of being foreseen by a diligent contracting authority like the Council at the time of the procurement or the entry into the contract.

A key factor in the delivery of this strategy is resource recovery and waste management and the following key principles below are consistent with this review:

- improve recycling rates by ensuring a consistent set of dry recyclable materials is collected from all households and businesses (separate collection but other designs are approved, provided a TEEP assessment is undertaken)
- reduce greenhouse gas emissions from landfill by ensuring that every householder and appropriate businesses have a weekly separate food waste collection, subject to consultation
- improve urban recycling rates, working with business and local authorities
- improve working arrangements and performance between local authorities
- drive greater efficiency of Energy from Waste (EfW) plants
- address information barriers to the use of secondary materials
- encourage waste producers and managers to implement the waste hierarchy in respect to hazardous waste

In May 2021 the Environment Bill was taken back to Parliament for a third reading. Through the Environment Bill, the Government aims to clean up the country's air, restore natural habitats and increase biodiversity. The Bill will also outline how the Government will reduce waste, make better use of resources, and improve management of water resources in a changing climate. The legislation builds on this Government's decisive action to protect the environment as set out in our 25 Year Environment Plan and the binding commitment to reach net-zero carbon emissions by 2050.

Although the Bill has been some years in discussion / consultation, that still preceded the procurement and the entry into the contract .Its forthcoming introduction into legislation in the current format at this time could not have been foreseen at the time of the original procurement by a diligent contracting authority.

At the time of writing, the clear thrust is to get councils (in their capacity as waste collection/disposal authorities) to increase their recycling/composting performance and reduce carbon impact; and as described above it is the Council's intention to do so from 2023 with a new design of service. It is worth stating that the proposed modifications to the service will produce a design of service which is an approved design and therefore fits with the requirements as set out in the Bill. However, a Technically. Environmentally and Economically Practicable ("TEEP") assessment would be required in order to validate the proposed modifications. We have completed many assessments, including for some councils in Essex; and are confident that the proposed modifications would pass such an assessment .

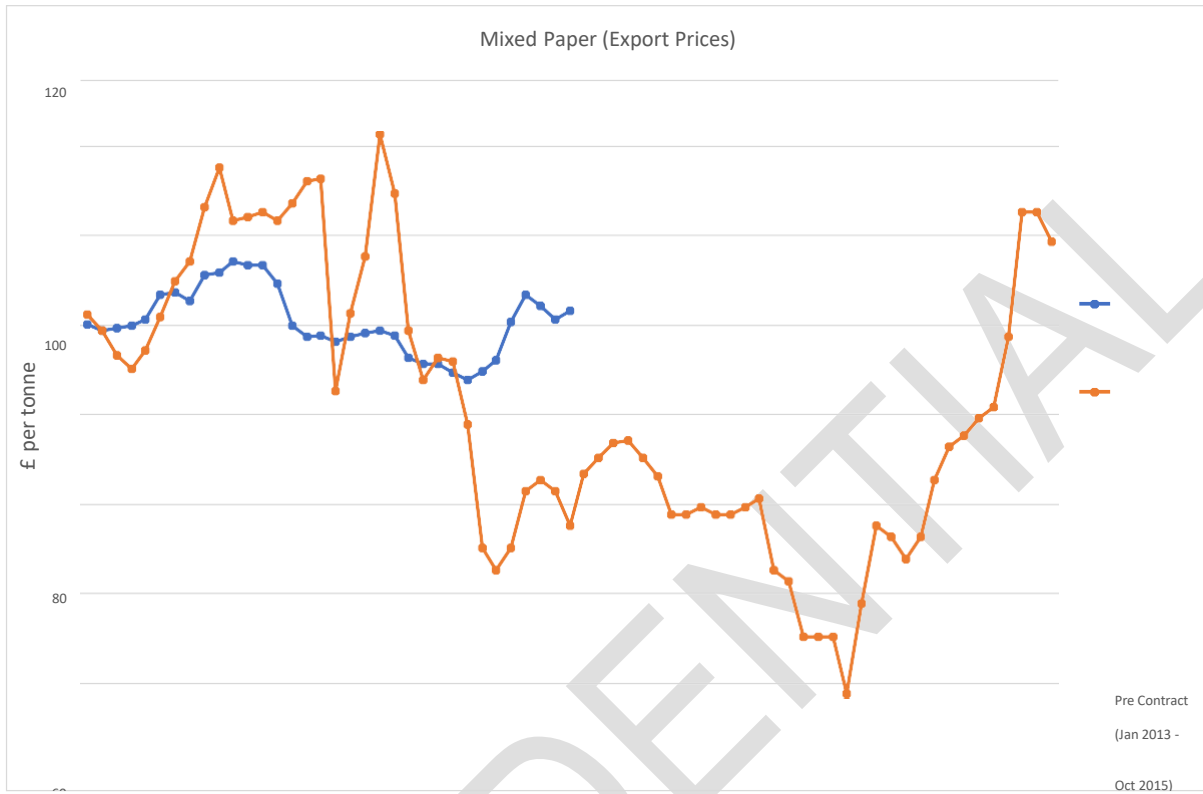
2.4 RECYCLATE VALUES

In part, all tenderers would have formulated their tenders by reference to a fairly well-established pattern and range of recyclate values. At the time of the procurement and entry into the contract, although there had historically been changes in recyclate values, these had generally been relatively minor fluctuations: therefore, waste companies were able, at the time of the procurement and entry into the contract, to take a view based on a relatively stable recyclate market position. That allowed them to accept a risk-share mechanism concerning recyclate values.

Since then, fluctuations have been more severe and more frequent, as the following graphs show. Data is taken from commodity prices as shown by Letesrecycle.com; such data is commonly used to inform price movement values on waste contracts: and we here consider the major constituents of the dry recycling stream at Southend.

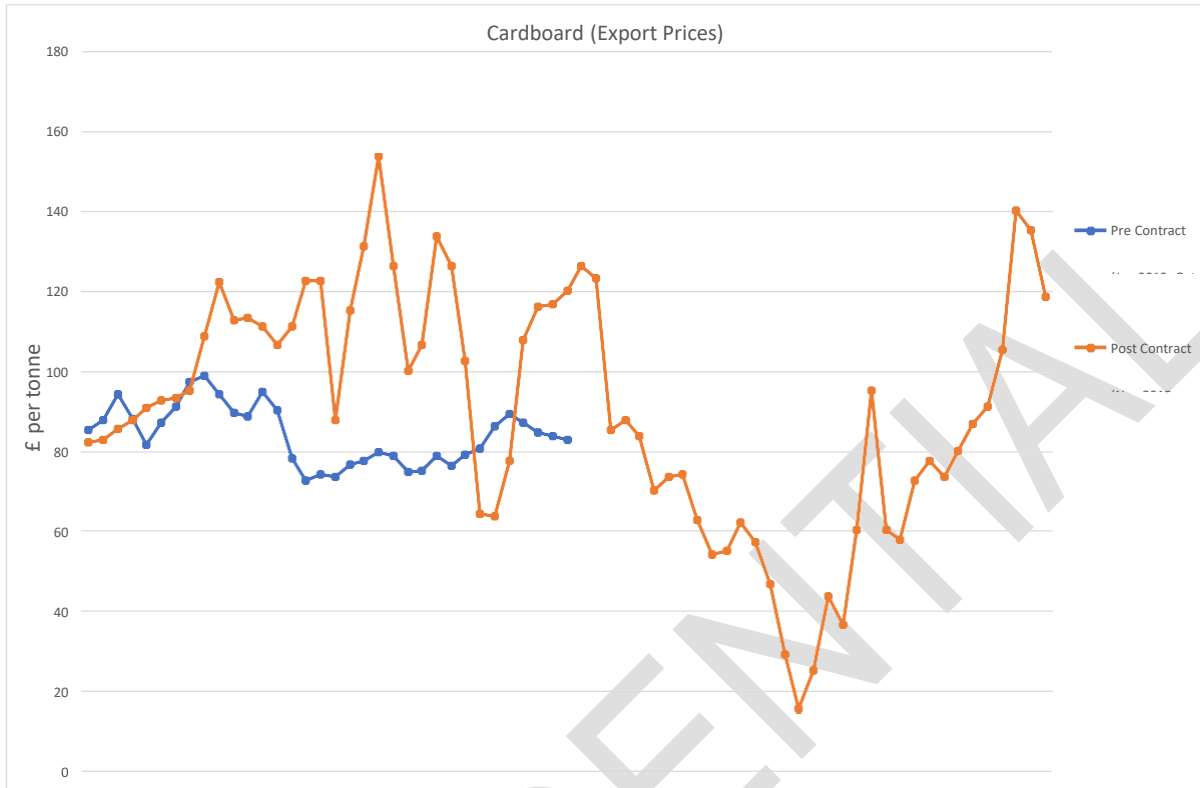
If we look at paper, which comprises ca. 22% of the dry recyclate collected at Southend, then during 2013 and 2014, the average price per tonne for mixed paper was some £62 with a high value during that period of £74 per tonne and a low value of £51 per tonne. However, since the start of the contract in October 2015, the price has fluctuated considerably, with a high value of £102 per tonne and a low value of just £5 per tonne (and we know of some councils who found that their paper had no value). See Figure 3 below:

Figure 3: Mixed paper export prices pre-contract compared with post contract



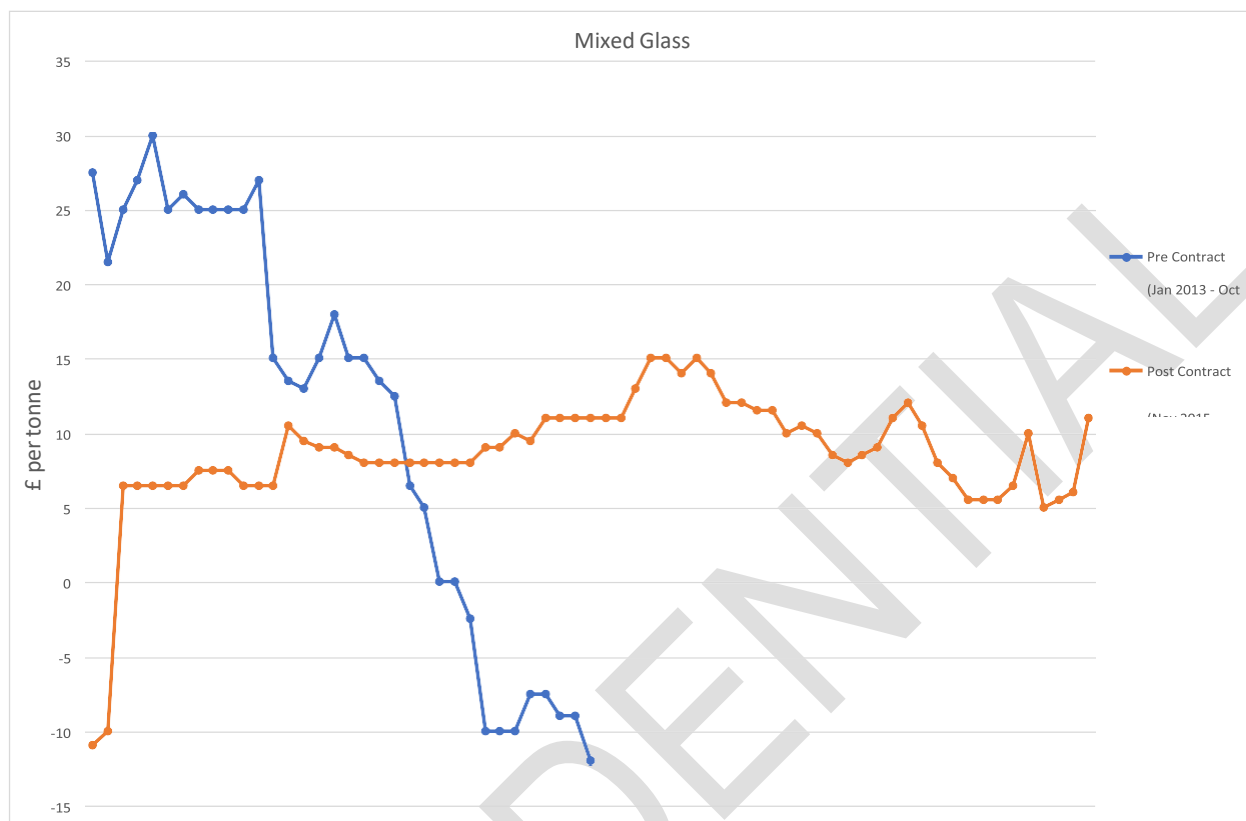
Cardboard comprises almost 10% of the dry recyclate collected at Southend. During 2013 and 2014, the average price per tonne was £84.40: with a high value during that period of £98.50 per tonne and a low value of £72 per tonne. However, since the start of the contract in October 2015, the price has fluctuated considerably, with a high value of £153 per tonne and a low value of £64 per tonne. See Figure 4 overleaf.

Figure 4: Cardboard export prices pre-contract compared with post contract



Glass is the largest fraction of the dry recycle stream at Southend, comprising some 42.5% of the total collected. During 2013 and 2014, the average price per tonne for mixed glass was £18.80: with a high value during that period of £30 per tonne and a low value (in December 2014: up to then values had been positive) of £0 per tonne. Since the start of the contract in October 2015, the price has fluctuated considerably, with a high value of £15 per tonne and a low value of minus £12 per tonne (i.e. processors were being paid to accept glass, a situation entirely unknown at the time of the procurement. See Figure 5 overleaf):

Figure 5: Mixed glass prices pre-contract compared with post contract



The result of these dramatic reductions in the market value of recyclate have coincided with the necessity to increase recycling; and the re-design of services referred to in 2.1 and 2.3 of this report mean that the volumes and composition of the collected recyclate are very different to those included in the original contract. A modification to the risk profile relating to how dry recyclables are dealt with in the contract is therefore considered necessary in order to respond to these increased volumes of dry recyclate.

It is entirely understandable that, with this change in price, taken together with the change in the collection system, a corresponding change in the risk share mechanism is required and hence the proposed modifications by Veolia to the current contract.

In summary, the rapid disappearance of the stability in price; very substantial reductions in price (as per 2.4) ; the need to increase recycling (as per 2.1 and 2.3) and the resultant change in the volumes and composition of the collected dry recyclate are circumstances which have brought about the need for the proposed modifications to the risk profile and indexation. Those circumstances can be fairly described as circumstances which were not foreseeable by a diligent contracting authority like the Council.