

Visit to the Hollingdean MRF (Materials Recovery Facility) of Veolia on 01/12/16
 or how to be a thinking citizen (following George Mikes in *How to be an Alien*).

Veolia is a French company active in four service and utility areas traditionally run by public authorities – water, waste, public transport and energy; they have over 300,000 employees in 48 countries, with annual revenues of around €30 billion [based on the entry in Wikipedia].

Veolia have a 30 year contract to manage waste collection and recycling for East Sussex and Brighton & Hove councils, covering the area between Hove, Eastbourne, Mountfield and Forest Row, with 14 sites in the Southdown area alone. The main activity is collecting domestic waste, materials for recycling and the contents of public waste bins, using a fleet of specialized vehicles operating more or less continuously. In addition, Veolia are waste management and recycling contractors to offices, shops, shopping centres, business parks, restaurants and distribution centres.

Prior to 2001, waste management was handled by one of Veolia's rivals, SITA, under a 5 year contract awarded in November 1999 and worth £6.7 million a year. Having made a huge investment, by 2001 SITA were operating at a loss and then made a clumsy attempt to reduce costs. It resulted in a dispute leading to lengthy strikes, uncollected rubbish and popular unrest in Brighton & Hove. B&H Council took SITA to court, eventually forcing them to pay £3 million to get released from the contract. The job was then awarded to Veolia, who took over all existing facilities. The strange business of municipal waste handling world wide is reviewed in the enclosed study **SITA in Brighton: Humiliation by the sea**, by Steve Davies, Senior Research Fellow, School of Social Sciences, Cardiff University, August 2001. Other details are in the review of press notices, also enclosed, **The SITA Saga**.

The Hollingbury Materials Recovery Facility (MRF) was developed and constructed by Veolia on the old Hollingdean abattoir site; its present capacity is 60,000 tonnes a year. It is designed to fit into the community as a good neighbour, operating around the clock adjacent to an existing school and newly built suburban housing (as shown below).



Materials Recovery Facility

The Materials Recovery Facility in Hollingdean, Brighton ensures that recyclables collected from householders by local councils in East Sussex and Brighton & Hove are sorted and delivered to reputable reprocessing companies, reducing the strain on the planet's limited resources.

The Hollingdean facility has the capability to process up to 60,000 tonnes a year, via a modern, clean, automated plant which works by separating paper products from plastics and metals. Then the process focuses on separating ferrous materials, aluminum cans, plastic bottles, paper and card.

The facility has the potential to process 60,000 tonnes per year

This automated system is supported by a dedicated team of operatives, who contribute significantly to the quality of the materials sent for reprocessing by removing contaminants as they pass through the plant.

Visitors to the facility are welcome, although for safety reasons age restrictions apply, for further information please contact: 01273 544205.

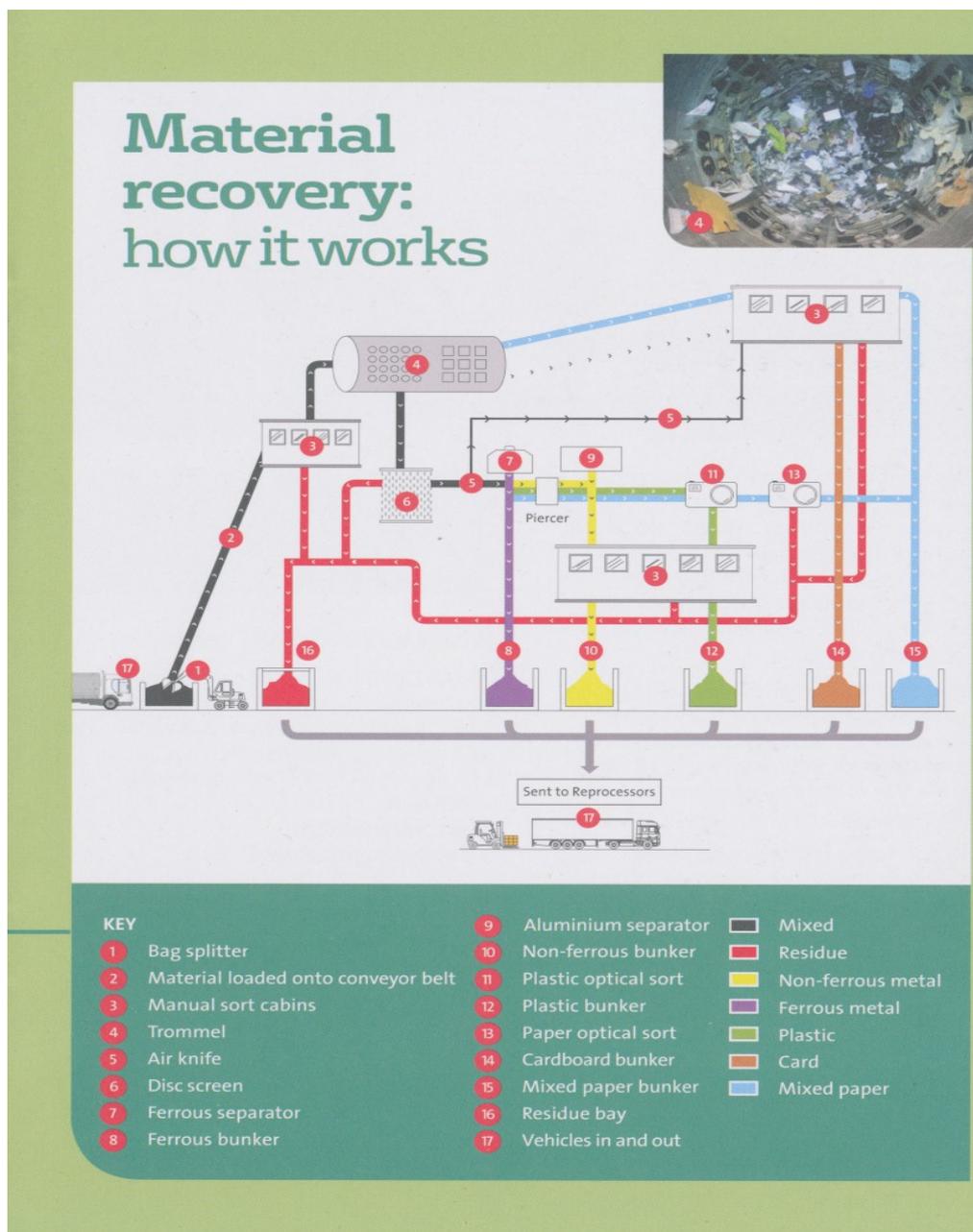


Items recycled here	Turned into
Newspapers, junk mail, paper	Newspaper
Card	Cardboard
Cardboard	Insulation
Plastic bottles	Fleece jackets, watering cans, street signage
Aluminium cans	Cans
Steel cans	Cans, car parts, white goods, cycles, cutlery

The system, including the MRF, is run to make a profit under constraints imposed by Government environmental regulations and targets, landfill costs and the state of the market for recovered materials. It is a complex and inflexible process, as shown in the schematic, in which the choice of bins and collection vehicles is crucial. Most important are those used for 'suburban' (or kerbside) collection: **household** rubbish and recycling bins, and **community** rubbish and recycling bins.

Special vehicles used for household collection, the predominant stream, are split along the long axis - bottles in one compartment, 'rubbish' in the other. Loading wheely-bins provided to households requires manhandling. Loaded trucks then enter the depot and discharge the two compartments in sequence: bottles and domestic rubbish. Other truck types are used to empty community rubbish and recycling bins; some of these are fully mechanised, others require manual loading.

The material recovery facility (MRF) comprises a complex system of conveyors that deliver the materials to different 'stations' for sorting by size and type as shown in the schematic.



First, an attempt is made to open plastic bags used for domestic rubbish disposal; the contents are then bulldozed onto a conveyor belt. Next, objects are sorted by size in a two-stage rotating drum; then light materials like paper are lifted off the belt by a stream of air and an attempt is made to remove ferrous metal by magnets and aluminium by eddy current devices. The stream is then manually refined by picking out and segregating remaining 'recoverables' like paper, cardboard, and recyclable plastic bottles at several points along the belt in labour intensive operations. The refined materials are then stored in bins and baled for disposal. This may involve sale, composting to make soil conditioner in the Woodlands IVCF, or burning in the Newhaven ERF to produce heat and electricity for sale to the grid, and (as a last resort) sent to landfill (with recovery of methane for combustion, where possible). What actually happens depends on the state of the market and the facilities of potential buyers - a complex problem of decision-making in a volatile market.

The system is designed to cope with virtually anything (except hazardous materials) but it helps if the public observes rules of good citizenship: not dumping furniture, domestic appliances or garden waste and putting the right materials into 'disposal' and 'recycling' bins. The broad rules are

- laminated packaging like food containers, soup cartons, wrappers, trays, sachets, objects contaminated by food, kitchen waste, house plants are not 'recyclable' and should be disposed with 'domestic waste' (some of which may subsequently be extracted for composting and converted into saleable soil conditioner)
- steel, aluminium or composite cans and clean aluminium trays, cups and foil can be recycled (but it helps to leave cup-cake cups 'open', otherwise they may get lost with 'fines')
- light bulbs should not be disposed with household waste but sent for recycling with batteries
- some plastic bottles can be recycled but it takes trained eyes to recognise which ones (and it helps if the containers are first rinsed and any caps excluded).
- Glass bottles should be put into the appropriate recycling bins (not mixed with household rubbish) and it helps if metal screw-caps are removed to be picked up by magnet separately;
- Paper and cardboard can be recycled but price received depends on the customers' facilities; the current customers can cope with window envelopes and small amounts of tape without removing the plastic, but cannot cope with shredded paper which is too fine for the pulpers.

Government Targets

The Landfill Directive states targets for reducing waste sent to landfill sites in the UK as follows

- By 2010, the waste sent to landfills should be 75% of that sent in 1995
- By 2013, the waste sent to landfills should be 50% of that sent in 1995
- By 2015, the waste sent to landfills should be 35% of that sent in 1995

In order to achieve this, 'Waste Strategy 2000' specified the following:

- Recover 40% of waste by 2005
- Recover 45% of waste by 2010
- Recover 67% of waste by 2015

The national recycling targets in 'Waste Strategy 2000' are that

- 25% of household waste should be recycled or composted by 2005
- 30% of household waste should be recycled or composted by 2010
- 33% of household waste should be recycled or composted by 2015
- The recycling targets for individual local authorities is 30% by 2005/2006

The government provided a 'Waste Performance and Efficiency Grant' of £260 million to aid local authorities in waste reduction, increased recycling and diversion from landfills.....

but: "In BRIGHTON & Hove recycling rates have slipped to a new low – with only 25.8% of waste reused. The City Council is one of the worst performing local authorities in the country, despite the Green administration's pledge that 70% of all domestic waste would be recycled by the end of May 2015. There were disappointing results also for Crawley Borough Council, where rates were down 1.24 percentage points to 24.87% and Adur District Council, down 0.69 percentage points to 32.56%. Encouraging signs come from Lewes District Council, where rates were up 2.66

percentage points to 24.98%. The national average for domestic recycling is 44% but during 2015/16, only 40% of household waste was recycled or composted in East Sussex." (all from the Argus, May 2015).

Comments by the manager of the Veolia MRF Plant

Our tour guide was the manager of plant. He noted that

- Since introduction of the 4p shopping bag charge, there has been a marked reduction in the number, but virtually no change in the tonnage discarded, because bags sold are intended for repeated use and made of thicker film (response to a question from one of the visitors)
- Poor recycling performance in Brighton & Hove is affected by having a large transient population of students and visitors who may come from communities following different practices

A copy of the Veolia brochure is enclosed (in scanned electronic form to avoid wasting paper).

Prices typically paid by customers for waste, per tonne, 2016:

Mixed glass	£0 to 10
Clear glass	£15 to £25
Steel	£50 to £60
Aluminium cans	£600 to £700
Aluminium foil	£200 to £400
Plastic bottles	£30 to £100
Cardboard	£0.50 to £0.70
Paper	£1.00 to £2.00
Wood, timber etc	£1.50 to £3.00
Landfill charges	£100 to £110

League Table of Local Authorities

Rank	Local Authority	Recycling Reuse & Composting Rates
1	South Oxfordshire District Council	67.3%
2	Vale of White Horse District Council	65.6%
3	Rochford District Council	65.2%
4	Surrey Heath Borough Council	63.3%
5	Three Rivers District Council	63.2%
6	Trafford MBC	61.9%
7	Stockport MBC	60.7%
8	Calderdale MBC	60.4%
9	Stratford-on-Avon District Council	60.3%
10	North Somerset Council	60.1%