



GREENWICH MATERIALS RECOVERY FACILITY

# sharing responsibility for the future

 **VEOLIA**  
ENVIRONMENTAL  
SERVICES

# meeting the recycling challenge

Recycling in the UK is increasing in response to legislation, the climate change imperative and the rising cost of waste disposal. Veolia Environmental Services is the UK's leading provider of waste management services, offering an impressive range of sustainable, integrated solutions designed to meet the constantly evolving needs of millions of residents.

With the backing and resources of an international environmental services company, we are ideally positioned to deal with the complexities of the recycling and reprocessing market. Our reputation for innovation and research is second to none and we work hard to develop pioneering technological solutions capable of recovering an increasing variety of high quality recyclable materials.

We have an unrivalled track record of developing successful long-term partnerships in the public sector; providing sustainable, cost-effective services, promoting waste minimisation, reuse and recycling and investing in the necessary infrastructure to meet public requirements, now and in the future.

## the Greenwich partnership

These key skills, resources and expertise were a driving force behind our selection for the partnership project with the London

Borough of Greenwich to construct the Greenwich Materials Recovery Facility (MRF). The facility is one of the most technologically advanced in the UK and the first to be established in an urban environment.

The MRF is capable of separating up to 75,000 tonnes of co-mingled paper, card, steel and aluminium cans, plastic bottles, glass bottles and jars every year. It accepts materials from co-mingled kerbside collections from within Greenwich, neighbouring local authorities and commercial premises.

Co-mingled collections simplify recycling for residents and improve participation rates. The ability to accept glass, which represents around 9% of the municipal waste stream, also significantly increases local authorities' recycling performance.

The potential of the Veolia-Greenwich partnership to improve London's recycling figures was recognised by the London Recycling Fund, who awarded it a substantial grant – the first time this body had ever invested in an MRF.

# recovering materials

The recovery process at the Greenwich MRF is automated wherever possible; employing the latest technology to efficiently recover materials of the highest quality, ready to be passed on to reprocessors.

## reception

Dry recyclables are delivered into the MRF reception area then transferred into a bag splitter, which opens the bags and delivers a steady stream of materials to the trommel screen.

The trommel – 12 metres long and 3.5 metres wide – rotates at 12 revs per minute, sequentially separating out containers, paper and card, which are then subjected to separate recovery techniques.



## plastic bottles

Plastics are flattened and then separated by an autosort, which shines an infrared light onto the conveyor belt. The computer senses the near-infrared wavelengths in the reflected light and is able to differentiate between the plastics, which are segregated into three separate streams. To maximise recovery, a manual sort subsequently further separates the streams into natural or coloured polymers.



## glass

Bottles and jars are crushed by two revolving drums and screened out from the plastic bottles. Any remaining non-glass materials are blown out of the glass using autosort technology.



## cans

Ferrous metals are extracted by an overband magnet and deposited in a bunker ready for baling. Aluminium is removed by an eddy current separator.



## paper and card

Patented technology – unique in the UK – enables Veolia Environmental Services to recover a range of paper types, including a very high-grade newsprint, whilst reducing the need for manual quality checking. An innovative Cascade Separation Process separates light materials, such as newspapers, from heavier materials such as magazines. The heavy materials pass through a near-infrared paper autosort which checks the quality of the product. A final manual quality inspection checks that the resulting material comprises three clear grades of sorted paper – cardboard, newspaper and pamphlets and mixed paper.



## baler feed

Material is transferred to the Baler Feed Conveyor, which runs through the centre of the plant, connecting the storage bunkers and feeding the balers in an even flow. Separated material is compacted into blocks, which are then wire-wrapped and stored in a loading area before being transported to re-processors.



# recovering the value of waste

Veolia Environmental Services markets and sells the recovered materials through a network of local, national and international re-processors. Regular and stringent assessment ensures the integrity and quality of the end product and helps to maximise the efficiency of the operation.

## health & safety

The MRF's automated operations are managed from a control cabin, where an advanced software package regulates speed and monitors performance. This system improves health and safety performance by limiting the need for manual intervention. In addition, the facility's specifications include stringent measures to create a safe and hygienic work environment, including noise attenuation, air conditioning and dust extraction.

## working with the community

The educational value of the Greenwich MRF was of prime importance to all involved in the partnership. The plant was designed and constructed to be accessible to all sectors of the community, facilitating educational tours and visits for environmental groups, the media and customers. It also features a purpose-built educational centre, which incorporates a PC-based interactive educational facility and an exhibition, designed to provide further information on the MRF and its role in supporting London's recycling initiatives

## local solutions, international expertise

The Greenwich MRF partnership is an outstanding example of how Veolia Environmental Services uses its global resources, knowledge and skills to work with a local authority to develop a sustainable environment and future for the community.

The facility has been strategically located to fit seamlessly with the Borough's waste management activities, rising to the challenges of population growth and urban concentration and minimising unnecessary transportation.

The Greenwich MRF uses the latest technologies to provide an efficient, local solution for the Borough's recycling needs, helping to achieve the increasingly ambitious recycling targets imposed by new legislation and enabling the community to turn their waste into a resource.





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