WESTERN RIVERSIDE WASTE AUTHORITY 2023/24









Waste reduction, reuse, recycling and energy recovery in your area

OUR WAY FORWARD





- REDUCE
- REUSE
- COMPOST
- RECYCLE







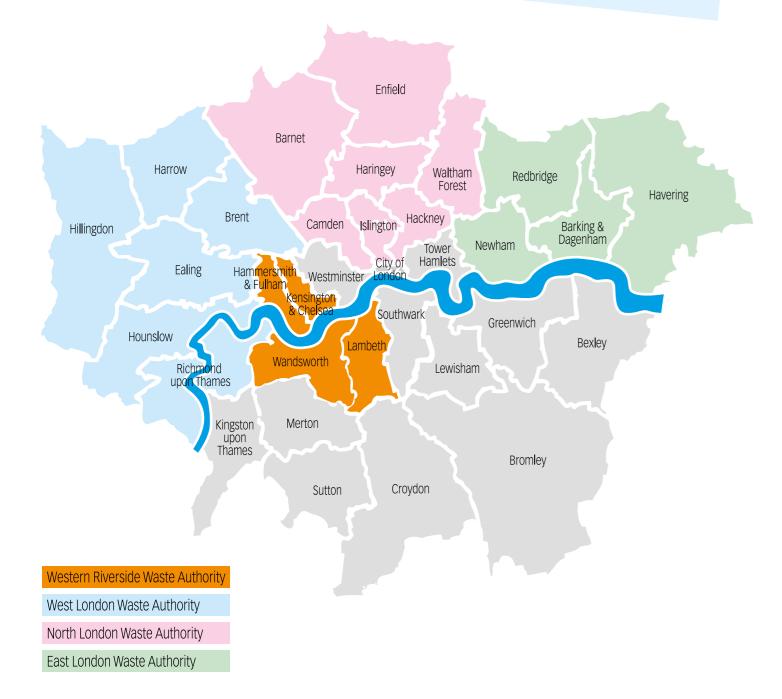




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Western Riverside Waste Authority (WRWA) is one of four Statutory Joint Waste Disposal Authorities in London which are charged by Parliament with managing the waste collected by their respective constituent councils. In the case of WRWA, these are the London Boroughs of Hammersmith & Fulham, Lambeth, Wandsworth and the Royal Borough of Kensington and Chelsea.



Foreword by the Chair



It has been a pleasure to lead the Authority's Members and officers in my role as Chair for a second year.

Managing a large quantity of our capital city's recycling and waste is never without it's challenges and the year under review was no exception.

Our primary responsibility - to receive, transport and treat the recycling and waste collected by our boroughs from their residents and business customers - remains unchanged and is a key public service, a service that we provide 24 hours a day, 7 days a week, 364 days of the year.

Whilst the Authority's operations, and the infrastructure which accommodates them, are secure, negotiations continued with our neighbours for the redevelopment of Cringle Dock, to ensure a new environmentally and neighbour-friendly Cringle Dock transfer station to allow our operations to be protected and greatly enhanced, thereby helping to provide a secure waste management solution for our residents well into the future.

The Authority has also been very much looking to the future, to how it will adapt and operate in the context of new and upcoming environmental legislation and amendments to existing law, which are introducing a number of important changes in how waste is managed in the very near future.

Beyond these legislative changes, the Authority has been focussing on how Borough waste may be managed in the mid and long term, with much of Members and officers time being spent on the continuing development of a Joint Municipal Waste Management Strategy in collaboration with our constituent councils. The Joint Strategy will set out our over-arching vision, ambition and priorities for how the waste the Authority manages will be treated and processed from 2025 to 2040 and sets targets for waste reduction, reuse and recycling. The Joint Strategy has been progressing well, and following a full public consultation we plan for it to be adopted by the Authority and our constituent councils in early 2025.

The Joint Strategy will also set the framework for our future procurement objectives beyond 2032, when our current Waste Management Services Agreement expires.

As in previous years, the Education Team remained busy hosting visits to our Education Centre and MRF, their focus being to encourage our residents to reduce, reuse and recycle more and contaminate less. These visits continue to be extremely popular with local schools, colleges and residents as well. We welcome any resident or local group wishing to arrange a visit to come along and see for themselves what happens to their waste and recycling. Another very good year for the Education Programme.

In the year under review, the Authority has undergone a period of change, with an expanding staff group to accommodate the challenging demands of the increased workload. This year sees these changes continue.

My thanks once again go to the Members and staff of the Authority for their diligence and dedication in ensuring a high level of service for our residents.

Councillor Rezina Chowdhury

WRWA Chair

Introduction to WRWA

Western Riverside Waste Authority (WRWA) was established in 1986 as an autonomous statutory local government body to undertake the waste disposal functions prescribed by the Local Government Act 1985 and the Waste Regulations and Disposal (Authorities) Order 1985.

WRWA is responsible for managing the waste collected in the London Boroughs of Hammersmith & Fulham, Lambeth, Wandsworth and the Royal Borough of Kensington and Chelsea. The boroughs have a combined population of approximately 992,000 living in 407,000 households. WRWA receives approximately 354,000 tonnes of recyclables and waste from the councils and their residents. In addition, Cory, our contractor, handles 170,000 tonnes of local trade and commercial waste and recycling through WRWA's facilities.



Photo: webaviation.co.ar

WRWA members

WRWA comprises eight Members who are appointed by its four constituent councils - each council appoints two elected Councillors annually to serve on the Authority. The Members meet regularly through the year (on at least four occasions), have overall responsibility for the policy and management of WRWA and are required (when representing the Authority) to act in the interests of WRWA as the Waste Disposal Authority for the combined area. The role of Members is described opposite.

Collectively, Members are the ultimate policy-makers and those responsible for the strategic and corporate functions of WRWA.

They participate in the governance and management of WRWA. They represent WRWA on other bodies.

They have a duty to maintain the highest standards of conduct and ethics and follow a Code of Conduct.

They work with the constituent councils.

They work with and influence regional and national partners such as the Mayor of London and the Environment Agency.

They approve responses to consultation documents.

Members 2023/24

Hammersmith & Fulham Council
Cllr Wesley Harcourt
(Deputy Chair) first meeting July 2014.
Sharon Holder first meeting June 2022.

Kensington and Chelsea Council Cllr Johnny Thalassites first meeting September 2022,

last meeting February 2024.

Clir Will Pascall first meeting June 2022,

last meeting February 2024. Cllr Sam Mackover first meeting June 2024.

Cllr Roberto Weeden-Sanz first meeting June 2024.

Lambeth Council

Cllr Jackie Meldrum first meeting September 2019. Cllr Rezina Chowdhury (Chair) first meeting June 2022.

Wandsworth Council

Cllr Judy Gasser first meeting June 2022.

Cllr. Leonie Cooper first meeting June 2022.

WRWA meetings

Authority meetings are the main decision-making forum for WRWA matters. At these meetings, the Authority sets its overall corporate direction, policy framework and financial limits, within which all of WRWA's operations and policies are carried out.

Authority meetings are generally held four times a year. They are open to the public and attendance is encouraged, unless exempt or confidential matters are being discussed.

Further details about meetings and the dates of future meetings are available on our website, **www.wrwa.gov.uk**, or by

contacting the Administration Office on **020 8871 2788.**

Equality, Diversity, and Inclusion

Western Riverside Waste Authority is committed to equal opportunities in employment and service delivery. The policies and practices of the Authority aim to promote an environment that is inclusive and free from all forms of unlawful discrimination and values the diversity of all people.

At the heart of our policy, we seek to treat people equally, fairly and with dignity and respect. The Authority will take every reasonable and practical step to ensure that persons working for the Authority, all job applicants, former employees, and any member of the public using the Authority's premises or services will not receive less favourable treatment (direct discrimination) or be disadvantaged by requirements or conditions that cannot be shown to be justifiable (indirect discrimination) because of, or perceived to be, or are associated with any of the following: Age, Disability, Gender reassignment, Marriage and Civil Partnership, Pregnancy and Maternity, Race, Religion and Belief, Sex and Sexual Orientation.

Freedom of Information

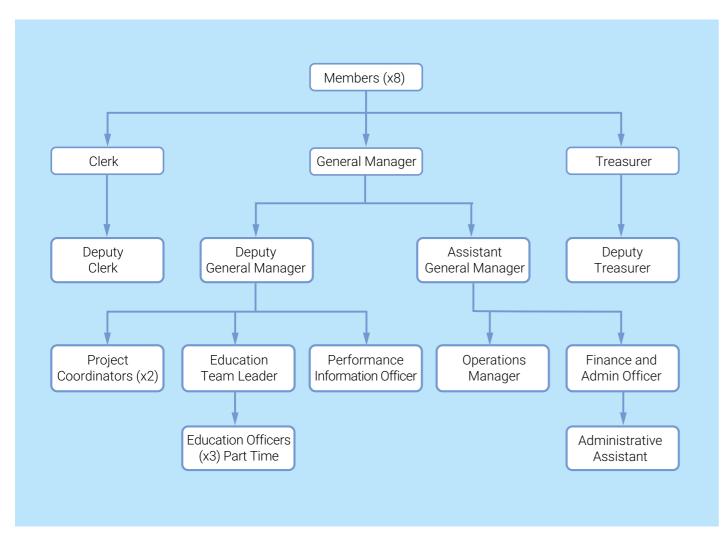
Under the Freedom of Information Act 2000, the Authority is required to produce a publication scheme of information which is available to the public. The Authority received six Freedom of Information requests in 2023/24, all of which were answered within the requisite timescale.

Complaints

The Annual Report is used to provide statistical information on complaints received during the year under review. In 2023/24 the Authority received thirteen complaints, all of which were responded to and, if necessary, actioned. Six of these complaints related to noise and odour nuisances originating from both Cringle Dock and Smugglers Way, two from residents following notification of their excessive use of DIY waste disposal, two relating to lack of customer care at the Smugglers Way HWRC, one concerning the lack of recycling options for aluminium foil food containers and one involved a resident being dissatisfied with the lack of information provided by HWRC staff on traffic congestion in the local road network.



The organisational structure of WRWA



WRWA officers and staff

The Authority is based at Western Riverside Transfer Station, Smugglers Way, Wandsworth, SW18 1JS.

Nearly 95% of the Authority's revenue budget is spent on contract payments. There are 11 full time equivalent posts including the General Manager employed by WRWA. Some financial and administrative support is also provided to the General Manager by Wandsworth Council and Lambeth Council.

Each of the four constituent councils provides a designated Technical Officer to liaise with the Authority and inform it of the views of the constituent councils. Technical Officers attend twelve regular officer liaison meetings a year in addition to the four Authority meetings.

With continuing development of a Joint Municipal Waste Management Strategy throughout 2023/24, engagement with other constituent council officers has increased significantly.



WRWA's Waste Management Policy

WRWA and its constituent councils are responsible for the collection, recycling, composting and treatment of some 354,000 tonnes per annum of household and commercial waste generated within their boundaries.

The Authority has pursued a progressive and innovative approach to waste management that is waste minimisation and recycling-led, whilst utilising the River Thames for bulk transportation.

Working in co-operation with each other and the private and not-forprofit sectors, the Authority and its constituent councils have focussed on the needs of residents to provide a sustainable waste management service that should set a precedent for future waste management developments in London.

Early in 2023 the Authority started to develop a new Joint Municipal Waste Management Strategy for the period 2025-2040. Member and Officer workshops produced draft priorities and a vision for the strategy:

"The Western Riverside partners will work together with our residents and businesses to prioritise waste prevention, reduce carbon emissions and environmental impacts and provide customer focussed waste and recycling services that maximise value for the materials we manage".

The Partners identified the following priorities:

- Transitioning to a circular economy
- Achieving net zero
- Collaboration and communication to amplify our impact
- Delivering best value and preparing for the future

The quantities of waste to be expected over the strategy period were forecast, different potential waste collection arrangements were modelled to see what impact they could make and this led to draft recycling targets. Joint action plans with the four constituent councils will be developed for each of the priority areas when the strategy is finalised.

Public consultation on the draft joint strategy took place during the Autumn of 2024, through an on-line survey and focus groups, with strong support for the priorities and with the view that the draft targets could be more ambitious. As a result, higher more stretching targets were added. The draft joint strategy is being considered by the Boroughs and the Greater London Authority before it is finalised in early 2025.





What WRWA does with your waste

In May 2002 WRWA entered into a long-term contract, known as the Waste Management Services Agreement (WMSA), with Cory Environmental Limited (now trading as Cory Riverside Energy). This contract is helping WRWA to realise its aim of maximising reuse and recycling and providing a greener future for management of its waste.

The waste management services provided by WRWA and Cory involve waste and recyclable material being delivered to the Authority's two transfer stations, at Smugglers Way in Wandsworth and Cringle Street in Battersea, for either reuse, recycling or treatment.

Western Riverside Transfer Station, near Wandsworth Bridge, can handle over 6,500 tonnes of waste and recyclables per week. WRWA's second transfer station, Cringle Dock, is located next to Battersea Power Station and can handle over 6.000 tonnes of waste and recyclables every week.

Cory takes advantage of spare capacity at the transfer stations for the receipt of local trade and commercial waste.

WRWA currently provides an integral Household Waste and Recycling Centre at its Smugglers Way transfer station and Lambeth Council also provides its own, additional, Reuse and Recycling Centre at Vale Street, West Norwood.

WRWA receives co-mingled and separated recyclables at its transfer stations and a Materials Recycling Facility (MRF) was constructed at Smugglers Way in 2010/11, so that most of the separation and baling process is now carried out on site,

and the baled materials are then transported on to their various reprocessing facilities in the UK or Europe.

Green Waste collected by the constituent councils and at WRWA's Household Waste and Recycling Centre is bulked at the transfer stations for onward transportation to a number of centralised composting facilities within, or just outside, the London area.

The waste that cannot be reused or recycled is compacted into containers before being loaded onto barges for their onward river journey to the Riverside Resource Recovery Limited's (RRRL) Energy from Waste Facility at Belvedere, in the London Borough of Bexley for energy recovery. The Authority is now sending "zero waste" direct to landfill and is generating enough electricity to power over 100,000 homes.

Collaborative negotiation between the Authority and Cory Riverside Energy led, in 2017, to a successful restructuring of the Belvedere Energy from Waste (EfW) Facility's long term borrowing which generates significant financial savings for the Authority as a consequence. The Facility will ensure a secure and environmentally sound treatment method for the waste which cannot be reused or recycled.

In November 2017, Cory published plans to build an integrated, lowcarbon energy park at its site in Belvedere, known as 'Riverside Energy Park' or REP. The site is currently in construction and plans encompass a range of technologies, including an anaerobic digestion facility to process food and green waste into soil conditioner, which the Authority could access to process more waste into useful products.

Cory is considering a number of approaches to reduce the carbon impact of their operations and meet net zero targets.

Carbon capture is a technological approach that EfW facilities can utilise to significantly reduce their CO2 emissions. Cory have proposed a carbon capture and storage (CCS)

project that could be developed in the area adjoining their existing and planned Riverside energy from waste (EfW) facilities in Belvedere. To capture the CO2 emitted by the existing and in-development EfW facilities, CCS technology and infrastructure is required. This would divert the emissions from the facilities, and then separate the CO2 from other gases so that it is not emitted into the atmosphere. Once captured, this CO2 would be compressed and liquified on site to make it ready for transport. It would then be transferred by ship to storage sites - which are being brought forward by other parties - under the North Sea.

Year-on-year increases in the rate of landfill tax mean that the **landfilling** of waste has become an uneconomic proposition as well as one which is found at the bottom of the waste hierarchy in terms of its impact on the environment.

The Government's **Waste Hierarchy**

Prevention

Preparing for Reuse

Recycling

Other Recovery

Disposal

Prevention, reuse and recycling

Recycle Western Riverside

The Authority runs a communications and education programme which encourages residents to Reduce, Reuse and Recycle their rubbish (the three 'R's). The education function is carried out by four Education Officers and the communications programme is directly managed by Authority staff.

The Education Programme

The Education Officers are directly employed by the Authority on a part time/term time only basis. They have the responsibility for using the Visitors Education Centre to host and conduct educational talks and tours for schools, colleges, community groups, residents' associations and other interested parties based in the Authority's area, with particular emphasis on the three 'R's and the importance of recycling correctly. Their responsibilities also include the promotion of these education services and outreach work in schools.

In 2023/24, due to carrying a few staff vacancies, the Education Programme focussed on school visits to the Smugglers Way site, accommodating a few off-site visits when capacity allowed. 95 class visits were hosted at Smugglers Way, with an additional 2 outreach school workshops taking place.

In addition to their work with schools, the Team also worked with local residents, community groups and universities. In 2023/24, there have been 10 on-site Adult tours and 2 offsite visits.

During this year the Education Team has undertaken to review the Education Programme to ensure that it meets the needs of the constituent councils and is ready for the key role it must play in the communications requirements of the Authority's new Joint Municipal Waste Management Strategy.



Reuse Project

In line with the waste hierarchy, WRWA and its constituent councils highlighted that they wished to increase the re-use of products and materials received as part of their waste streams.

Following a successful funding application submitted to the London Waste and Recycling Board (LWaRB) for a reuse project in the Authority area, a project was established at Smugglers Way in 2011.

One of the main aims of the reuse project is to help achieve behaviour change within the WRWA area. The reuse project helps with changing residents' behaviour by providing a tangible system that will prolong the life of goods and help residents to see the potential value in things they would usually discard.

The project provides affordable items for people who need them and back-to-work opportunities for people who are long-term unemployed. It encourages the reuse of most easily reusable, repairable or recyclable bulky items which should be in good condition or in a repairable state. These include the items shown in the blue box overleaf.

The project comprises two elements:

ReWork

One element of the project is a workshop - "ReWork" - at the Smugglers Way Transfer Station in Wandsworth that is used to refurbish and PAT test reusable large electrical appliances. Cory has provided space and buildings within the transfer station to create sufficient storage for the reusable goods and items. The access to and refurbishment of these buildings has enabled a safe and fully contained reuse working area to operate away from the main transfer station operations.

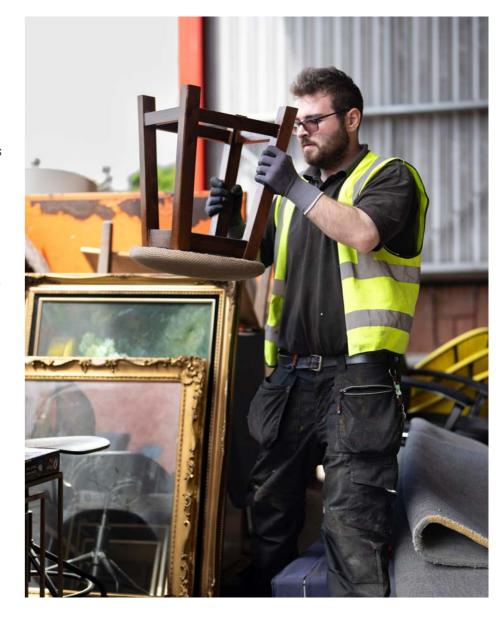
Rework is operated by Groundwork London and, with the support of WRWA and Cory, delivers three aims:

- Refurbishing and reusing unwanted domestic items, particularly white goods.
- Providing training and paid work experience in electrical engineering and maintenance for local people

who have been out of work for some time, and so helping them to gain the experience and the skills necessary to seek employment opportunities.

 Providing high quality affordable large electrical appliances to low income families. There are now fifteen full-time members of staff in post and three trainees on waged work experience.

In 2023/24, Rework's trainees refurbished 4,500 electrical items in the workshop, including washing machines, fridges, cookers, microwaves and other household electrical goods.



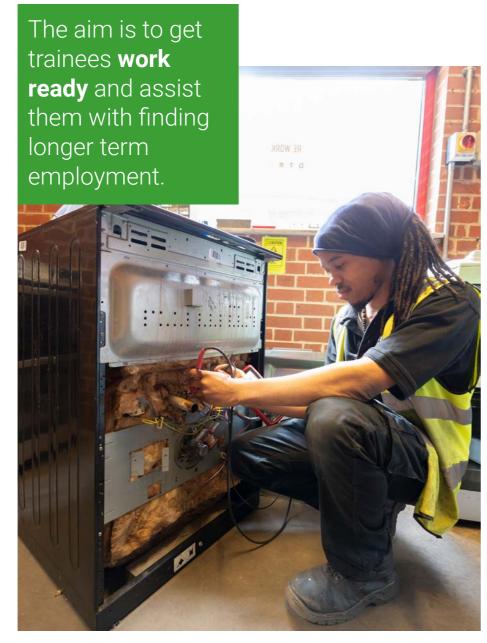
PREVENTION AND REUSE

Spare Parts Scheme

Following a successful funding application, a "Spare Parts" scheme was established in 2018, through which Rework collects reusable parts from large domestic appliances delivered to the HWRC (that are not themselves in a suitable condition to be reused as whole appliances), sorts and catalogues them and put them up for resale online.

Reuse collection service

Each of the constituent councils encourages its residents to consider booking a reuse collection service for items that are in good condition, rather than booking a Council Bulky Waste collection service for disposal of items they no longer need or want. All the constituent councils currently direct their residents to charities such as the British Heart Foundation or Emmaus for furniture and electrical and electronic equipment collections; TRAID will also collect small to medium-sized waste electrical and electronic equipment, as well as textiles. Additionally, the councils promote the use of online platforms such as Freegle and Gumtree.



The Reuse Project will take:

- · Furniture (in good condition) Including bed bases, sofas (with a fire certificate), tables, chairs, cupboards, chests of drawers.
- Large appliances/white goods Including fridges, washing machines, tumble driers, cookers microwaves.
- TVs Flat screen only
- Bicvcles
- · Bric-a-Brac

Small electrical items

Including hi fi's, turntables, radios, amplifiers, routers, gaming boxes and accessories, key boards, etc.

- Sports equipment
- Tools Including electrical or hand tools.
- Toys

For all electrical items, it doesn't matter if they are no longer working.

Recycling

The Authority recycles a whole range of materials at its Household Waste and Recycling Centres and a full list can be found on our website at

www.wrwa.gov.uk

The following sections describe what happens to some of the larger recycling streams.

Co-mingled Recycling and the Materials Recycling Facility (MRF)

Cory began the construction of an 84,000 tonne per annum MRF at the Authority's Smugglers Way Transfer Station in November 2008. This facility is processing co-mingled recyclate delivered by the Authority's constituent councils from their co-mingled recycling schemes.

Before construction of the main MRF building itself could start, preparation works were carried out to the river wall and a containment barrier was installed along the eastern boundary of the Household Waste and Recycling Centre site to prevent any slightly polluted water (from the site's historic use as a Gasworks) under the main body of the site from draining into the Thames.

The design and build of the main MRF building and associated civil works were carried out during 2009 and the installation of the bulk of the processing and associated equipment was carried out during 2010. Commissioning commenced in October of that year and the facility was officially opened by Her Royal Highness the Princess Royal in March 2011.

The MRF has a design capacity of 84,000 tonnes per annum and has been designed to process co-mingled materials, delivered loose or in plastic bags, consisting of a mix of one or more of the following dry recyclables: paper, cardboard, glass bottles and jars, clear and coloured PET plastic (e.g. drink bottles), clear and coloured HDPE plastic (e.g. laundry and washing-up liquid bottles) steel and aluminium cans and polycoat material (e.g. Tetra Pak).

The facility has allowed the Authority to be self-sufficient in relation to

the sorting of collected co-mingled recyclable materials, complying with the proximity principle and reducing vehicle movements associated with this activity. The MRF building incorporates an Education Room providing facilities for educational activities in relation to the 3 'R's which is of particular benefit to school children and students from colleges in the four boroughs, as well as visitors from the local community and further afield.

The building also benefits from the installation of photovoltaic cells (or solar panels) on its roof and visitors can see a display showing how much electricity they are generating and the carbon emissions saved as a result.

Following two significant fires in 2016, further fire prevention measures were deployed, including the installation of fire curtains and a deluged water system in addition to the sprinkler water system. Other improvements carried out alongside the refurbishment works have also resulted in an increase in the efficiency of the MRF.





How does the MRF work?

The MRF initially sorts the recyclable materials mechanically based on their specific size and shape properties.

The recycling sacks and bags are loaded onto a conveyor belt and travel through a 'bag splitter' which uses small blades to rip open the bag, releasing the materials.

The loose materials then pass through a sorting cabin where empty recycling sacks and contaminant materials are removed from the conveyor belt.



The rest of the materials travel up onto a set of screens. A screen comprises a set of rotating shafts with steel star-shaped discs spread out over a specific distance and inclined.

On the first screen sheets of cardboard "surf" up and over the screens, whilst the rest of the materials fall through the gaps. The material that falls through the bottom moves on to the next screen, where the distance between the discs and their speed of rotation is set so

that newspapers and pamphlets "surf" over the top and the rest of the material falls through the gaps. This process is then repeated on two further screens to remove mixed papers, plastic bottles, tubs and cans - while the glass and smaller items fall through all the screens.

The material from each screen then goes past an optical sorter that removes any rogue material that has incorrectly "surfed" up a screen (rogue recyclable material is returned to go around the process again).

The cardboard and paper products then go through a manual quality control area before being baled or loaded loose into road bulkers.

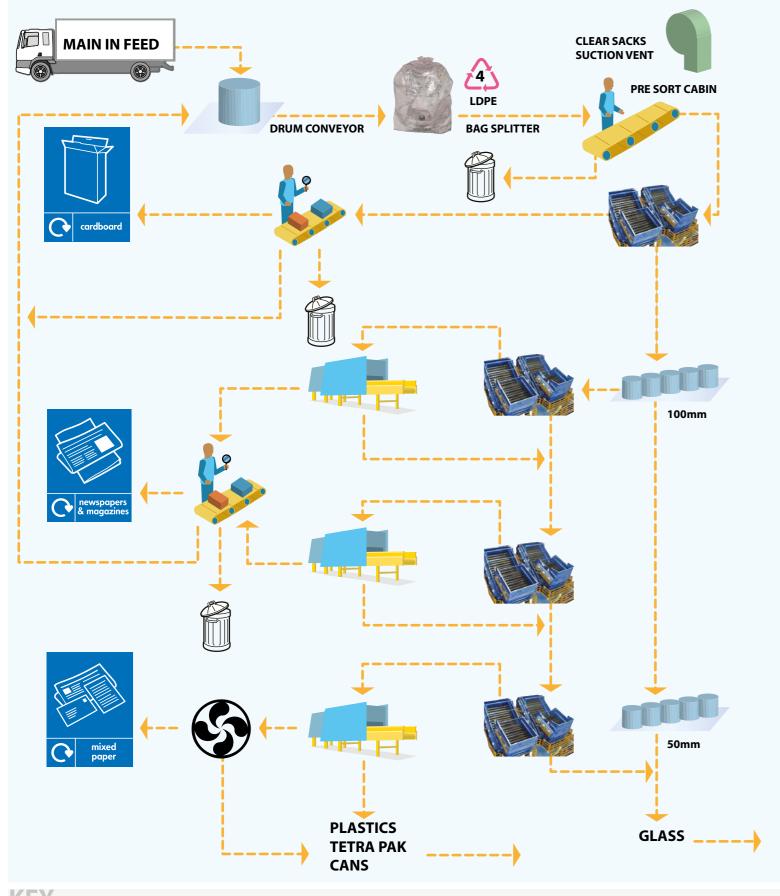
The cans are removed by magnetic and eddy current separators and the plastic bottles, pots, tubs and trays go through further optical sorters which can sort the material into different chemical types and colours.

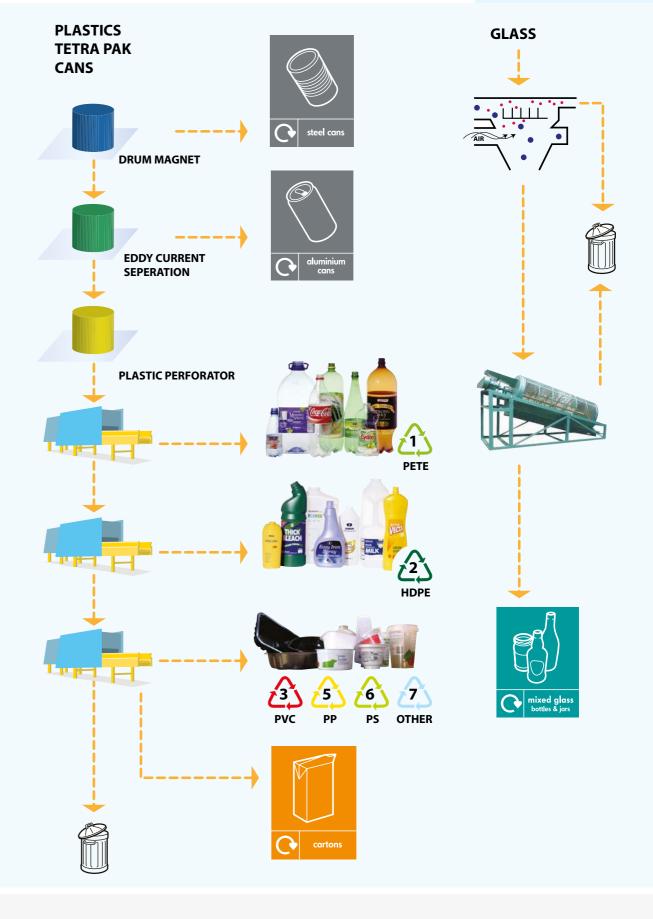
The glass goes through a large rotating drum with holes called a 'trommel' (that looks a bit like a washing machine drum) which separates the smaller items that should not be with the glass.

All the products leave the site by road (as the destinations are many and varied) with newspapers, pamphlets and glass going loose in bulkers and with the other materials being baled and transported by curtain-sided vehicles.

The materials can be recycled into many different products - for example, paper is made into new packaging and various paper products, glass bottles and jars are recycled into new bottles, windows, other glass products or used as an aggregate material. In some cases the material is remade into the same product - steel cans become cans once again and some plastic bottles can be made into bottles again, or into other types of plastic container.









5 RECYCLING















TROMMEL (Separates glass



CLASSIFIER (Removes light material)

Garden Waste delivered by residents to the household waste and recycling centres is sent for composting at an Open Windrow Composting facility. The windrows are generally turned to improve porosity and oxygen content, mix in or remove moisture, and redistribute cooler and hotter portions of the pile. The temperature of the windrows are measured and logged constantly to determine the optimum time to turn them for quicker compost production.

Detritus Waste

Detritus waste is wet waste collected by mechanical street sweepers and gully cleansing vehicles. Detritus is made up of water, grit, stones, sand, soil, organic waste and litter. This waste is sent off to a specialist reprocessor and 65% of it is currently recycled. The water is cleaned and reused, the grit and stones are used as an aggregate material and the clean litter (mostly cans and plastic) is recycled.

Feathers Wharf

The Bulk Bays for receiving source-segregated recyclables were moved to Cringle Dock in 2013 and therefore the Authority does not currently require the use of its area of land at Feathers Wharf, adjacent to Smugglers Way Transfer Station, for waste disposal purposes. It was agreed that for the foreseeable future the land will be leased to a third party and, in 2015, planning permission was granted by Wandsworth Council for a change of use to Storage of Construction Plant and a new tenant took up occupancy. However further plans for the future use of the site are discussed in Section 8.



Household Waste and Recycling Centres (HWRC)

WRWA provides a Household Waste and Recycling Centre (HWRC) at its Smugglers Way Transfer Station where local people can leave items for reuse or recycling or, if a reuse or recycling option is not available, for disposal. Residents wishing to deliver their Household Waste in a van have the option of delivering the waste to either the Smugglers Way Transfer Station or Cringle Dock Transfer Station.

The Smugglers Way HWRC is based on a split-level concept, so that the public is physically separated from the operational activities. This layout provides greater flexibility to users when they deposit material and has reduced waiting times. This, combined with a significant increase in the number of cars able to queue on site at peak times, has helped to reduce local traffic congestion.

A vehicle number plate recognition system is also operational which is designed to detect cars that use the site too frequently and highlight this to the centre's recycling advisors, who can monitor the types of waste being disposed of by the vehicle owners. This helps to prevent commercial waste operators using the site illegally. This system also records the vehicle details and has a database facility to enable Authority staff to monitor site usage.

Following the closure of the Cringle Dock HWRC in 2013 the Authority carried out a review of the operation of the Smugglers Way HWRC, particularly focussing on waste that is technically defined as industrial (such as tiles, windows, doors, timber and wooden flooring, bricks, rubble, paving, stones and hardcore, bathroom suites and fittings, fencing, sheds, kitchen units and fittings, soil, turf, etc). Small quantities of this material continue to be accepted at the HWRC free of charge from residents using cars, motorcycles, bicycles or on foot.

However, until the end of December 2023 free delivery of residents' waste in vans was limited to that which most people would reasonably take with them when moving house, e.g. large items of free standing furniture and white goods. On 31st December 2023, the Controlled Waste (England and Wales) (Amendment) (England) Regulations 2023, came into force. This legislation required the Authority to permit residents wishing to drop off DIY waste in a van, up to 100 litres of bagged DIY waste, or one large item no bigger than 2m x 0.75m x 0.7m i.e. one bath tub, one door or one kitchen unit, for free, every week.

An example of the layout of the site is shown opposite.

There are two large bays for specific items that are intended for recycling or reuse (see Bay A and Bay B opposite). HWRC staff are proactive in ensuring that residents reuse and recycle as much of their waste as possible and only use the general household waste containers as a last resort. We have individual containers for a whole range of items that can be recycled. These are shown below.



BAY A RECYCLING AREA

Bay A is for the following items which are beyond repair, and will be recycled:

- Books (reused and Mobile phones recycled)
 - Batteries
- Used engine oil
- Large appliances Cooking oil Spectacles
- TVs and monitors
 - CDs and DVDs

Gas bottles

 Printer cartridges Fluorescent tubes

BAY B REUSE AREA

Bay B is for the following items which are in reasonable condition. White goods will be repaired or reused:

- Large appliances
 Bicycles
- Sports equipment Flat panel TVs
 - and monitors • Bric-a-Brac
- Microwaves Furniture

Please ensure items are in good cosmetic condition



HWRC Booking System

Owing to the Covid-19 pandemic many waste disposal authorities and unitary councils took the decision to introduce booking systems to manage site usage when reopening their HWRCs. This had a knock-on effect in the WRWA area and it soon became apparent that increasing numbers of residents of other areas were using our facility instead of their own. This increased the queuing problems that occurred after lockdown restrictions were lifted, particularly at weekends, impacting greatly on the local area and our close neighbours in particular. As a result of this it was agreed that Authority officers would investigate the feasibility of introducing a trial booking system for residents to use the Smugglers Way HWRC.

The decision to introduce the trial was made by WRWA's members at its meeting in September 2020 and, following a procurement and evaluation process, Bookinglab were appointed to provide a booking system and install a compatible ANPR system.

The trial came into effect in March 2021 and it became clear immediately that the booking system was helping to reduce the queuing at peak times and prevent non-residents from using the Centre, thus reducing costs to our constituent councils and their residents. Prior to the system being reviewed again by the Authority in September 2021, both an in-person and an online survey were undertaken over a two-week period in August in order to establish visitors' experiences of using the booking system trial. Analysis of the data received showed that the majority of respondents were overwhelmingly positive and in favour of keeping the system.

The survey, combined with the fact that the overall tonnage delivered had dropped indicating that the Booking System was being effective in stopping non-residents using the facility, informed the report submitted to the Authority in September, when members agreed to approve the continuation of the Booking System on a permanent basis and to enter into a further five-year contract with Bookinglab.



Recovery

The journey by river

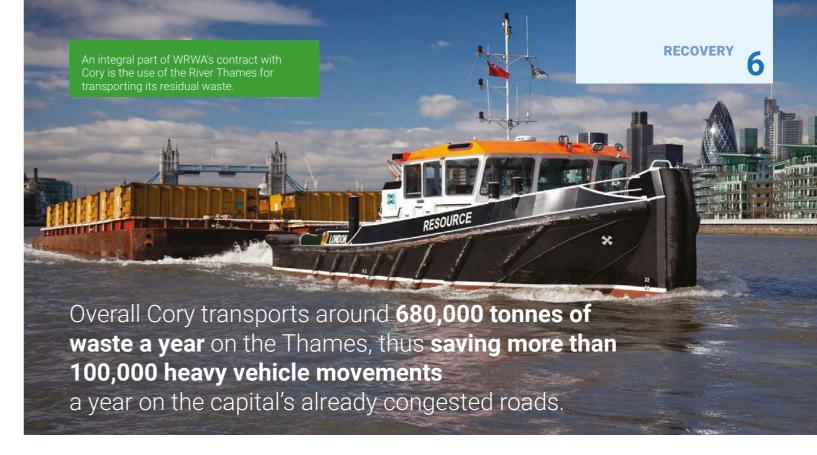
An integral part of WRWA's contract with Cory is the use of the River Thames for transporting its residual waste that cannot be reused or recycled. The waste is loaded by crane onto one of Cory's barges in sealed containers - each of Cory's 47 barges has a 300 tonne capacity and is pulled by a tug, which tows them some 20 miles downriver to the Riverside Resource Recovery Energy from Waste facility in Belvedere.

The river operation is governed by the tides. Craft containing full containers go downstream on the ebb tide and empty containers are taken back upstream on the flood tide.

Transporting waste by river is occasionally difficult, particularly when there are high winds or fog, but from an environmental point of view it is an excellent method of transport. The four hour journey from the transfer stations to Belvedere, negotiating bends, bridges and currents, requires an experienced skipper at the wheel. Although commercial river traffic has declined. the tugs' crews need to keep a watchful eye for pleasure craft and other users of the river.

Overall Cory transports around 680,000 tonnes of waste a year on the Thames, thus saving more than 100,000 heavy vehicle movements a year on the capital's already congested roads.

To complete the process, the Incinerator Bottom Ash (IBA) produced at the Riverside facility is taken back on Cory's barges in specially designed containers to an IBA processing facility at Tilbury Docks, developed by Ballast Phoenix. This can process 170,000 tonnes of IBA a year to recover metals and produce a construction aggregate currently being used on the M25 widening scheme and many other road and construction projects.



Belvedere Energy from Waste plant

The Belvedere Energy from Waste plant (EfW) plant is owned and operated by Riverside Resource Recovery Limited (RRRL), a wholly owned subsidiary of Cory. The Facility provides for the incineration of waste, and the use of the heat from the process to generate electricity through steam generation in boilers.

It is the second largest EfW Facility in the UK and one of the largest in Europe, which generates 80 MW of power (6MW of which is used on site and the remaining 74 MW is exported to the National Grid). The facility is consented to receive up to 785,000 tonnes of residual waste each year and RRRL became fully responsible for its operation in 2011.

Use of the EfW plant does not artificially limit WRWA's ability to reduce or recycle its waste. Whilst WRWA has the benefit of a guaranteed level of capacity at the facility it remains free to reduce or recycle its waste without limitation. WRWA is not required to supply any guaranteed level of tonnage to the facility, or make any minimum payment. Indeed, the Authority receives a royalty for any capacity it gives up and is therefore positively incentivised to make such reductions.

The planning permission only allows for 195,000 tonnes per annum to be delivered to the Facility by road, with all the remaining waste to be supplied by river. All but 115,000 tonnes of the river waste (transferred via the Port of Tilbury) must originate from within Greater London. The majority of the waste is therefore transferred to the facility via the Authority's Transfer Stations at Smugglers Way and Cringle Dock, the City of London's Transfer Station at Walbrook Wharf and the Transfer Station at Northumberland Wharf in Tower Hamlets.

The Incinerator Bottom Ash (IBA) is being processed at Ballast Phoenix Limited's IBA recycling plant at Tilbury Docks which was constructed to

recycle the bottom ash produced at the Facility.

Over 150,000 tonnes per annum of the inputs to Belvedere (approximately 28%) will end up as bottom ash and this is transported from Belvedere by river barge to Tilbury. Ferrous and non-ferrous metals are reclaimed during processing, with the remaining material being processed into aggregate, destined primarily for new road schemes.

The Riverside facility was officially opened by Her Royal Highness The Princess Royal in 2012 and it is one of the UK's most efficient energy recovery plants and an important strategic waste management facility for the capital.



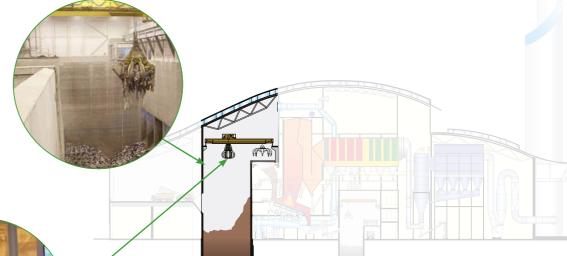
RECOVERY The Energy from Waste Process When the tugs arrive at the facility's jetty the waste containers are unloaded by two goliath gantry cranes and placed on the back of dock tractors and trailers. These vehicles deliver the waste containers into the tipping hall of the plant and also take containers of Incinerator Bottom Ash from the facility back to the jetty for onward processing and recycling at Tilbury. **Western Riverside Waste Authority**

The Energy from Waste Process

Tipping hall 1. Waste arrives in the tipping hall in containers on the back of RRRL's fleet of dock tractors and trailers and in a variety of waste collection vehicles from the surrounding area. 2. The waste is tipped into one of 12 tipping bays. Each bay has a hydraulically operated door which minimises noise and odour during the tipping operations. Lights on each tipping bay indicate to the drivers of the vehicles which bay is available to receive waste.

Waste bunker

1. The waste bunker is 30m deep, 61m long and 16m wide. It can hold up to around 10,000 tonnes of waste – enough to fuel the whole plant at full capacity for five days.



2. Overhead waste so it value through feed each lines ensuboilers ha

2. Overhead waste cranes mix the waste so it maintains a similar heating value throughout. The waste cranes feed each of the three combustion lines ensuring that each of the boilers has the required feedstock for continuous 24-hour operation.

DID YOU KNOW?

Infrared cameras detect any hot spots. If any hotspot exceeds 85°C water cannons will automatically operate.

Waste combustion

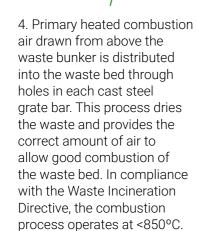
1. Waste is fed into one of the three feed hoppers by the overhead cranes. The waste then travels down the chutes and onto a horizontal feeder table.

2. Hydraulically operated ram feeders push the waste onto the sloping grate.



3. The sloping stoker grate consists of alternate rows of fixed and moving cast steel bars. Through the forward movement of these bars the waste tumbles slowly down the burning waste bed. The resulting burnt out product -Incinerator Bottom Ash – falls from the base of the grate

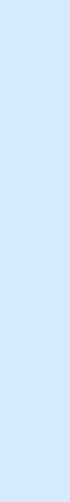
into a quench bath.



5. Secondary swirling air introduced above the grate through cylindrical nozzles ensures that the gases in the waste are thoroughly mixed. This results in a fully optimised combustion process and encourages low levels of toxicity in the gases leaving the combustion chamber. NOx levels are reduced by ammonia injection to the levels required in the Environmental Permit.



7. Gases and smoke produced during combustion are drawn through the gas passes of the boiler by an induced draught fan.



flue gases heats the water in the boiler tubes turning the heated steam. This steam drives the turbine which in turn drives the generator, producing electricity.



1. The Incinerator Bottom Ash which drops from the grate into a quench bath is then pushed by hydraulic rams onto vibrating conveyors and from there falls into the ash bunker.

Any oversized metal or other objects fall off the conveyor into skips to be recycled.

2. The Incinerator Bottom Ash is moved by overhead ash cranes from the ash bunker into elevated loading hoppers which are positioned over an internal roadway.

3. Incinerator Bottom Ash is discharged from the hoppers into ash containers.

These containers are transported to the jetty on dock tractors and trailers and placed on barges to be taken to the IBA processing facility at Tilbury.

Around 170,000 tonnes of ash per year is sent for processing.

Flue gas treatment

1. Flue gases leave the boiler and pass into a Turbosorp® reactor tower where hydrated lime, powdered activated carbon and water are injected into the swirling gas flow. These help neutralise acids and capture heavy metal particles.

DID YOU KNOW?

The Air Pollution **Control Residue** (APCR) is a by-product of the combustion process and accounts for approximately 4% of the facility's waste throughput.



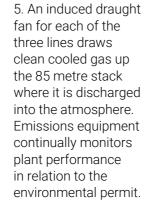
2. Gases from the Turbosorp® reactor tower are drawn into one of three fabric bag filters which each consist of 2,048 6m long cylindrical fibre bags on steel wire cages. The clean gases pass through the filters and the Air Pollution Control Residue (APCR) collects on the outer surface of the bags.



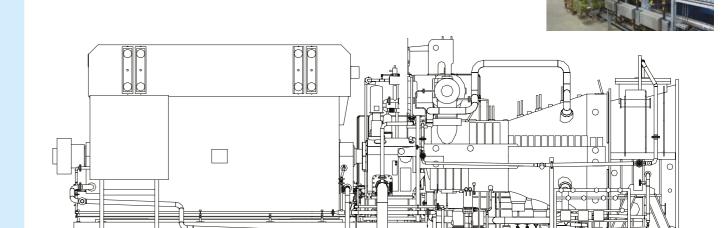
3. Compressed air pulses shake off the APCR into silos. The APCR is removed from the site by road tanker.



4. Clean hot gas is drawn out of the fabric filter bags through a heat exchanger which allows heat to be transferred from the gas into the boiler feed water.



Steam turbine and generator





1. High pressure steam from each of the three boiler drums is directed onto rings of fixed blades causing the turbine to rotate at high speed.



2. The steam turbine is coupled to the electric generator which rotates at the same speed as the turbine. This produces high voltage electricity which is sent to the 132kv substation and on to the National Grid. The plant produces enough electricity to power around 100,000 homes.



3. Exhaust steam leaves the turbine and is cooled in an air cooled condenser. The resulting condensate is then returned to the boilers as boiler feed water.

Looking back - 2018/19 to 2023/24 review

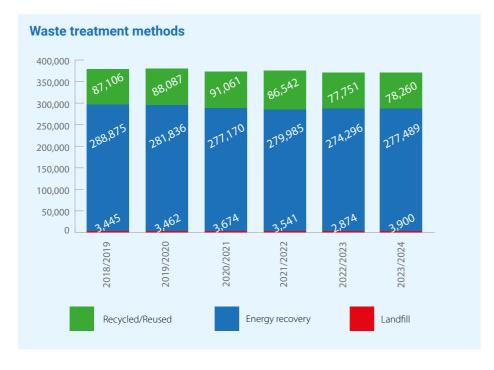
Waste trends

For WRWA, the real success generally in the last decade has been the significant decrease in total waste arisings which was accompanied to begin with by a simultaneous increase in recycling tonnages. Since 2012/13 we have met and achieved our aim of reducing to "zero" the waste sent direct to landfill. However, in the five year period under review, the total waste managed by the Authority has fallen and indeed over the last decade the Authority and its constituent councils have been successful in achieving the aims of the waste hierarchy by reducing the Municipal and Household waste it handles against a background of increasing population and household numbers. The Authority's recycling tonnage consists of mainly dry, post- consumer recyclable material with very limited amounts of green garden waste – the Authority's area being among the most urbanised in the country. Wood collected at the HWRC is no longer counted as part of the recycling tonnage as they are processed via Biomass which is a recovery process.

Performance monitoring

WRWA continually monitors its performance. Waste tonnage data is collated daily, weekly, monthly, quarterly and annually and is analysed to establish trends for each type of recycling or waste received. Budgets are similarly monitored and regular financial reports are presented to Members three times per year.

WRWA charges the constituent councils directly on the type and tonnage of material that they individually deliver to the Authority's sites. This means that the cost of waste treatment is borne by the councils fully in accordance with the "polluter pays" principle and it also means that they too are directly and continually monitoring WRWA's performance.



Looking forward a future for waste

Our plans for the future

Cringle Dock

Cringle Dock is one of the fifty Safeguarded Wharves located on the River Thames allocated for the handling of cargo by barge. It is one of London's key waste infrastructure sites and now transfers around 256,000 tonnes a year, or nearly 5,000 tonnes each week, of non-recyclable 'black bag' waste - an amount equivalent to one quarter of that produced in the whole of Wales - which demonstrates Cringle Dock's importance as a strategic public asset.

Cringle Dock has operated as a waste transfer station since 1972 and is protected by planning policies contained in the London Plan 2011 and Wandsworth Council's Core Strategy. These policies require that any development adjacent to a Safeguarded Wharf must minimise the potential for conflicts of use and disturbance.

In the last decade planning decisions have released industrial sites around

Cringle Dock, such as Battersea Power Station and the Nine Elms Vauxhall area of London has undergone a transformation to provide new mixed residential, commercial, retail and leisure complex uses. The existing waste transfer station at Cringle Dock does not sit comfortably with the new surrounding land uses. The transfer station is over 50 years old and architecturally very much out of keeping with the proposed new developments. Furthermore, the current operational design of the waste transfer station is based around waste storage bunkers; whilst functional, the open air system can, on occasion, emit odour nuisances.

There is a shared goal to provide a state-of-the-art waste processing facility that minimises, or even removes, the need for it to interact with or impact upon its new neighbours in any way.

In the year under review, officers continued to meet with our immediate neighbours to discuss our plans for the redevelopment of Cringle Dock and ensure that arrangements are in place to accommodate the receipt of waste 24 hours a day, 7 days a week in line with the Authority's primary and statutory duty.



Feathers Wharf

In preparation for the requirements of the Environment Act 2021, WRWA is identifying options for separating food waste, including the option to develop a food waste transfer station on Feathers Wharf and possible modifications to its Materials Recovery Facility at Smugglers Way.

Waste Management Strategy Review

In 2018 it was agreed to delay the production of a new Joint Municipal Waste Management Strategy until after the Government had published its Resource & Waste Strategy, the introduction of the EU Circular Economy Package and the impacts of Brexit were clearer. The outcome of further consultations in 2019 and 2021 on consistency in waste collections, extended producer responsibility and the introduction of a deposit return scheme, caused further delay.

In 2023/24, the Authority together with it's constituent councils continued with the development of a new Joint Municipal Waste Management Strategy, which is to be adopted in 2024/25.

Sustainability Statement

Through its Waste Management Policy and the letting of its Waste Management Services Agreement with Cory Riverside Energy the Authority has been able to significantly increase the proportion of waste from within its area that is reused and recycled and all of its residual waste is now used to recover energy at the Belvedere EfW Facility, rather than going to landfill.

Following the Government's waste hierarchy will generally lead to the most beneficial outcomes in terms of climate change and the overall reduction in the waste handled by WRWA (as shown in the graph in Section 7) has delivered the greatest

savings both environmentally and financially.

Transporting the residual waste along the River Thames by barge saves London's congested roads from 100,000 heavy goods vehicle journeys a year. The residue from the Energy from Waste facility's burning process is, again, transported by barge from Belvedere to Tilbury to be processed into aggregate for the construction industry.

The Authority will, through its future policies continue to endeavour to further reduce the environmental impact of its waste management activities.



Financial statement

WRWA's responsibilities

The Authority is required to ensure that its business is conducted in accordance with the law and proper standards, and that public money is safeguarded and properly accounted for, and used economically, efficiently and effectively.

It also has a duty under the Local Government Act 1999 to make arrangements to secure continuous improvements in the way in which its functions are exercised, having regard to a combination of economy, efficiency and effectiveness.

A brief summary of the draft unaudited Financial Statements for 2023/24 is shown opposite.

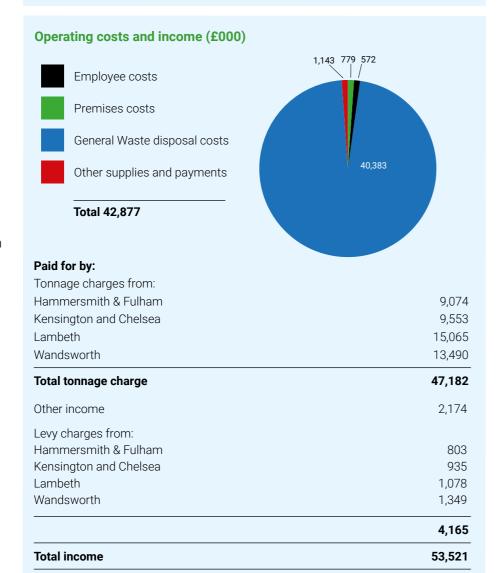
Auditors' report

Deloitte LLP, the Authority's external auditor, published its annual audit letter for the financial year 2022/23 in October 2024, in which it confirmed

"Our work considering these arrangements is based on our assessment of the adequacy of the arrangements the Authority has put in place, based on our risk assessment. The commentary does not consider the adequacy of every arrangement the Authority has in place, nor does it provide positive assurance that the Authority is delivering or represents value for money. We have not identified any significant weaknesses in the Authority's VfM arrangements, and so have not reported any recommendations in respect of significant weaknesses".

Summary of audited financial statements - subject to audit

Balance sheet as at 31 March 2024	
	£000
Buildings and land owned by WRWA	107,868
Money owed to WRWA	42,897
Money owed by WRWA	- 10,109
Long term loans	- 1,000
Pensions liability	-
Total	139,656
Financed by:	
Accounting reserves	102,508
General Fund balances	37,148
Total	139,656



Surplus for the year

How can the public help?

Below are some tips that everyone can use to recycle more effectively.

- Follow the Recycling guide opposite, or visit our website at www.wrwa.gov.uk to find out what can and cannot be recycled.
- Also check out the website to find out why we can't recycle other materials in the recycling sacks and bins - including shredded paper and batteries.
- 3. Limit the packaging you use try to avoid using plastic bags if possible.
- Wash out containers to avoid attracting animals, particularly if you store your recyclables outside.
- 5. Take responsibility, we can all make a difference.

Remember that up to 60% of the rubbish that ends up in the dustbin could be reused or recycled. However you should not use your recycling sacks and bins for disposing of normal rubbish, as currently around 14% of the material we receive is on the list which contaminates the rest.

6. Use your Household Waste and Recycling Centres. Although some of the material on the list cannot be recycled through the Co-mingled recycling scheme, it may be possible to recycle it by taking it directly to your HWRC.

Recycling Guide

What can I recycle in my clear sack or recycling bin?

It couldn't be easier. Instead of throwing the items listed below into your general rubbish, just throw them into your clear sack or recycling bin.

The items just need to be clean and dry, and if you're putting in bottles or jars please remove the lids first.



Remember to recycle correctly by looking out for the materials below. Please do not put them into your clear sack or recycling bin.



- 10,644

Glossary

Co-mingled recyclable material

Mixed recyclable material that, in the WRWA area, is usually collected from the kerbside in a single clear sack, green bin or communal bin. The Authority currently limits these materials to glass bottles and jars, clean paper and card, food and drinks cans, Tetra Paks and plastic bottles.

Carbon Capture and Storage (CCS)

A process that captures carbon dioxide (CO2) emissions from energy generation sources such as power plants, EfW facilities and other industrial emission sources. It is then transported and stored safely so that it will not re-enter the atmosphere.

Commercial waste (sometimes also referred to as Business or Trade waste)

Waste from premises used wholly or mainly for the purposes of a trade or business or for the purpose of sport, recreation, education or entertainment, but not including household, agricultural or industrial waste.



Detritus Waste

Is waste, generally from street sweeping or gully emptying operations, that requires some dewatering prior to its further treatment or disposal.

EfW - Energy from Waste

EfW facilities produce clean, renewable energy through the combustion of municipal solid waste in specially designed power plants equipped with the most modern pollution control equipment to ensure clean emissions.

Environment Agency (EA)

An agency established by statute to monitor and protect the environment. Its responsibilities include licensing of waste facilities.

MRF (Materials Recycling Facility)

Is a facility to sort mixed delivered recyclables into individual commodities with a view to securing maximum recycling and value. The Authority uses a "clean" MRF to sort co-mingled recyclable materials into individual material types. A "dirty" MRF sorts recyclable material from the general waste stream.

Municipal Waste

This term is generally meant to refer to all waste that is in the possession or under the control of a waste disposal or waste collection authority. Sometimes also referred to as Municipal Solid Waste.

Recyclable materials

Recyclable materials are materials that are capable of being recycled.

Dry recyclable materials include paper, plastic, glass and cans which are either collected separately or mixed, or are deposited into on-street banks by the public.

Waste Collection Authority (WCA)

The local authority (in London, the London Borough) responsible for collecting waste from households and certain commercial premises.

Waste Disposal Authority (WDA)

The local authority responsible for disposing of waste collected by the WCA. In London this can be either a joint waste disposal authority (e.g. WRWA) or a unitary authority. London Boroughs which are not a constituent member of a joint authority are both unitary disposal authorities and collection authorities.

Waste hierarchy

This is the Government's strategic order of preference for waste management under which, for instance, energy recovery and recycling is considered better than landfill.

WEEE (Waste Electrical and Electronic Equipment Directive (2002/96/EC))

The Directive aims to reduce the waste arising from electrical and electronic equipment, and improve the environmental performance of all those components involved in the life cycle of electrical and electronic products.

WMSA – Waste Management Services Agreement

The Authority's long-term contract with Cory Environmental Ltd.





END OF THE LINE FOR WASTE

Contact us

We are keen to hear from local people and other interested individuals or organisations and would positively welcome comments on this document.

Comments about this annual report may be submitted to:

The Clerk

Western Riverside Waste Authority Smugglers Way Wandsworth London SW18 1JS

Tel: (020) 8871 2788

You can contact WRWA's Offices on 020 8871 2788 or via email at info@wrwa.gov.uk

This report and other useful information about WRWA is available on our website www.wrwa.gov.uk

