



Collection of Residual Waste, Recyclables & Hazardous Waste from Households



City of  Vienna
Vienna is special.



Driver with waste collection vehicle

Vienna's municipal territory offers approx. 430,000 waste containers, 19 waste collection centres and 112 sites for the collection of hazardous waste from households. In all, Municipal Department 48 (MA 48) annually collects around one million tonnes of waste produced by the city's households and small businesses.

Collection from waste containers

Around 430,000 containers enable the collection of residual waste, waste paper, organic waste, waste glass, scrap metal and plastic bottles from households. For commercial enterprises, additional containers for plastic foils and kitchen scraps are available as well. Each container is emptied 65 times per year on an average, which equals a total of roughly 27 million emptying operations. Emptying a waste or recyclable container means transporting it from its point of installation to the collection vehicle, tipping its contents into the lorry or lifting the container with a crane (for waste glass) and then returning it to its original position. Transport distances vary and may present obstacles in the form of stairs or inclines. The emptying rounds are effected by 257 waste collection patrols with the required number of drivers and over 800 waste collectors. Depending on the difficulties presented by a collection area, two, three or five waste collectors accompany a vehicle.

Collection of residual and similar waste

Residual waste is collected in containers with a capacity of 120, 240, 770, 1,100, 2,200 and 4,400 litres,

which are mostly used by households. If their waste composition corresponds to that of household residual waste, commercial enterprises may also use these containers in some locations.

Smaller containers (120 to 770 litres) are used wherever there is little space for installing and handling them or if no larger volume is needed. Above all in old inner-city buildings with their multiple flats, it is often necessary to put up the containers in the basement because of cramped conditions. In new residential buildings, waste storage rooms are specially provided and must be designed and equipped according to the requirements of MA 48. According to the Vienna Building Code, all plans must be submitted to MA 48, which then checks and approves the dimensions and location of the waste storage rooms.

In 2012, approx. 223,000 containers for the collection of residual waste were in use across Vienna. These are emptied as required between one and six times a week; in individual cases, even twice

daily. Inside the collection vehicle, the waste is compacted by means of a rotating ("Rotopress") or straight press ("Variopress"). The majority of these vehicles are able to empty bins with a capacity of 120 to 1,100 litres; special vehicles are used for the large 2,200-litre bins. Every year, MA 48 collects approx. 500,000 tonnes of residual waste.



2012

Type of waste	collection routes	container types (volume in litres)	number of container
Residual waste	158	120/240/770/1,100/2,200/4,400	223,000
Hospital waste	1	120/240/770/1,100	600
Waste paper	44	120/240/770/1,100	94,000
Biowaste	32	120/240/770	83,000
Metals	4	240/770/1,100	6,000
Waste glass (except fully automated collection)	3	120/240/770	4,000
Plastics	11	240/770/1,100	13,000
Kitchen waste	4	120/240	2,000



Separate collection of recyclables

Vienna's collection system offers a combination of waste pick-ups (by MA 48) and waste deliveries (by citizens and businesses) that is adapted to the quantity of recyclables and the local urban development structure. Containers installed on properties (pick-up by MA 48) are complemented by containers publicly installed in parking lanes or on sidewalks (delivery by users at approx. 4,300 sites across the city) and containers at 19 waste collection centres. Waste paper, clear and coloured glass, organic waste, scrap metal and plastic bottles are collected as recyclables. Additional containers for plastic foils and kitchen scraps are available for commercial enterprises.

The key elements of separate recyclable collection are green containers with a capacity of 240 to 1,100 litres. The lids are in the colour assigned to the specific recyclable collected in each bin; in addition, the fronts of the bins likewise feature pictograms indicating the material to be discarded here. In some cases, 120-litre containers are used (rarely, mostly for waste paper and organic waste), as are containers designed for lifting with a capacity of 750, 2,000 and 3,000 litres (for waste glass).

The containers are emptied by vehicles and personnel of MA 48; private hauling companies are also employed for waste glass collection.

This container system allows for the collection of approx. 250,000 tonnes of recyclables annually.

Waste paper

Containers for waste paper collection are installed, if possible, close to the front door of a building; another option is adjacent to the residual waste containers. In less densely inhabited areas, they are set up in decentralised locations, e.g. at street corners; they can also be found at the waste collection centres. Every year, 125,000 to 130,000 tonnes of waste paper are recovered in Vienna.

Organic waste – garden cuttings and waste for composting

About 80,000 "green bins" with their typical brown lids and brown labels are installed across Vienna's less densely inhabited zones with numerous gardens, mostly directly on the properties. During the vegetation phase, these containers are emptied every week free of charge by 27 collection vehicles; in the winter months, the vehicles pass every other week. Only plant matter is collected: tree and shrub cuttings, leaves, lawn clippings, windfall fruit and plants. Waste of animal origin such as meat products, eggs and bones or food scraps are disposed of as residual waste (in case of households) or in specially designated kitchen waste bins (catering industry). Every year, a total of 65,000-70,000 tonnes of biogenic material are collected from green bins. This is complemented by 30,000 tonnes of garden

waste originating from skips at the 19 waste collection centres and from green waste (tree and shrub cuttings) recovery.

Organic waste – kitchen scraps for biogas generation

In condensed urban areas, approx. 4,000 public “green bins” are installed on sidewalks and in parking lanes and emptied by five collection patrols. However, the major portion of the kitchen scraps collected by MA 48 originates in restaurants and cafés, canteen kitchens or commercial enterprises. In addition to food scraps, other types of fermentable waste, such as spoiled foodstuffs including their packaging (e.g. tins) or used cooking fat, are likewise collected from companies active in the sector. Four special collection vehicles as well as 2,200 hermetically sealable kitchen containers are available to store this sort of wet and pulpy waste. The special containers hold 120 litres and are automatically cleaned every time after emptying. In this way, 9,000 tonnes of household kitchen scraps as well as 12,000 tonnes from commercial enterprises are collected annually and transported to the biogas plant for energy generation.

Waste glass

Waste glass is collected in Vienna since 14 November 1977; as of 1990, the system has been covering all of Vienna. A key characteristic of waste glass recovery is the collection of clear and

coloured glass in either two separate containers (for pouring and lifting) or in one two-chamber container (for lifting). The containers are picked up by special vehicles that likewise dispose of two separate chambers for colourless and coloured glass, which allows for the collection of both fractions in just one go. The lift-type containers are emptied by means of a loading crane; the other type is emptied by pouring the contents into the vehicle hold. The waste glass containers are set up in public locations such as sidewalks or parking lanes as well as at waste collection centres. Every year, between 25,000 and 30,000 tonnes of waste glass are recovered in Vienna.

Metals

The collection of scrap metal and cans was initiated in 1985. Today, these containers with their blue lids can be found across the entire municipal territory at recyclable collection points and waste collection centres. Scrap metal collected includes beverage cans, other metal packaging and small metal objects.

Metals are divided into different fractions and recycled at specialised facilities. Every year, approx. 4,000 tonnes of scrap metal are collected from the containers set up in public spots, e.g. on sidewalks or in parking lanes. Metals discarded in residual waste containers despite the separate collection scheme are either separated from the slag after incineration or, in case of mechanical

treatment, directly removed from the residual waste by means of separators for ferrous and non-ferrous metals, and subsequently recycled. Every year, over 10,000 tonnes of ferrous and non-ferrous metals are thus separated from residual waste and then recycled.

Plastic bottles

The collection of plastic items was initiated as early as in 1989. Foils, yoghurt cups and hollow items were collected in separate containers for the first few years. The coming into force of the Packaging Ordinance on 1 October 1993 led to the collection of all types of plastic packaging covered by the ordinance in one mixed system as “plastics and composite materials”. As of December 1995, only large plastic packaging foils and large-volume hollow plastic items for packaging were collected separately.

From autumn 2004 to spring 2005, the system was switched over to a new collection scheme for hollow plastic items (plastic bottles). The currently used containers dispose of lockable lids with openings for inserting the bottles. By changing the collection scheme, it was possible to reduce the portion of incorrectly discarded bottles from up to 40% to less than 10%. Containers for plastic bottles are installed all over the municipal territory in public locations and at waste collection centres. About 5,000 tonnes of plastic bottles are thus collected every year. Commercial enterprises are



Simmering waste collection centre

provided with containers with flat lids and without locks for collecting plastic foils. Since 2013, two municipal districts of Vienna also offer pick-up collection of plastic bottles by means of “yellow bags” (this is available for areas mainly characterised by single-family homes). The switch made it possible to double the collection rate in these test areas.

Separate collection by street cleaning personnel

Since 2008, street cleaners collect and separate plastic bottles and beverage cans from street sweepings and emptied waste bins. By 2012, a total of 1,300 tonnes of such waste were thus collected separately and duly recycled.

Separate collection at waste collection centres

Since 1988, Vienna’s population can rely on waste collection centres as their one-stop contact points for bulky waste, electrical appliances, recyclables and problematic household waste as well as objects that are still in working order and thus need not yet be scrapped. Customer-friendly opening hours enable citizens to leave their waste without hassle and free of charge at these centres. Every year, the 19 waste collection centres are visited by 2.4 million persons, who drop off 160,000 tonnes of waste. Of this volume, approx. 70,000 tonnes are construction waste; 20,000 tonnes, bulky waste; 15,000 tonnes, organic waste; the rest is composed of other recyclables, electrical appliances or problematic waste. The waste collection centres not only provide a

place where to leave all sorts of special waste but also offer other services for Vienna's citizens: thus high-grade compost from green waste can be picked up free of charge; peat-free soil with compost is for sale as well. To promote the idea of waste avoidance, the waste collection centres also accept used and functioning objects for the MA 48 flea market ("MA 48 bazaar").

Collection of hazardous waste from households

Hazardous waste, cooking oils and electrical appliances can be dropped off – always free of charge – at 19 waste collection centres, at four stationary collection points for hazardous waste set up at permanent open-air markets or at mobile collection vehicles. Due to their size, big household appliances (with an edge length > 50 centimetres) like washing machines are only accepted at waste collection centres. In all, 112 stationary and mobile locations are available across Vienna. The waste thus collected is weighed and sorted into various containers according to safety and disposal aspects. The 89 mobile collection points for hazardous waste are as a rule staffed for two hours every four weeks; on Saturdays, the mobile collection points set up shop for five hours at a stretch. Usually, the quantities of hazardous waste accepted by the collection points must not exceed one to five litres (normal household quantities), depending on the specific fraction. Moreover, it is also possible to dispose of some types of hazardous waste such as device batteries, fluorescent

tubes or electrical appliances free of charge at some shops. Expired medical drugs can be left at many pharmacies free of charge. Every year, MA 48 disposes of approx. 7,000 tonnes of hazardous waste, which mostly originates from households but also from commercial shipments delivered to the waste treatment plant of MA 48.

Financing

The financing of the collection and treatment of all municipal waste is based on the residual waste fraction in order to create an incentive for separate waste collection. Thus property owners are charged a quarterly waste management fee calculated from the volume of the residual waste containers installed on their properties and the

frequency of bin emptying. This residual waste management fee finances the collection and treatment of all waste in Vienna (with the exception of packaging material, used electrical appliances and batteries). The more material is collected separately, the smaller the container volume that needs to be installed, and the lower the cost. The minimum container capacity for residual waste is 120 litres; for hygienic reasons, every residual waste container must be emptied at least once a week. The collection and treatment of packaging material, used electrical appliances and batteries are financed via manufacturers and importers according to the principle of manufacturer's responsibility.



Collection of problematic waste



Collection of residual waste

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