

Mulberry Knowsley

A brief overview of site operations

Booking and pre-acceptance

Waste collections are booked and recorded via the computer system. At this point waste details are gathered and pre-acceptance checks are done on the material to ensure compliance with the site's permit as well as storage levels. We don't accept waste on site unless there is room for it to be stored.

Waste collections are carried out by trained Mulberry drivers on 99% of jobs. The drivers ensure that waste collected is in safe and suitable containers. These containers need to be weatherproof and if possible, stored under cover on site to protect against the elements.

Mulberry storage containers shown below are rented by private customers as well as councils (HWRC's) and other waste management facilities.



LS150 Lamp container (geobox)



LS350 Lamp Container



6 foot Lampsafe

Site Acceptance

The above containers are delivered back on site at mulberry waste Knowsley. The waste is receipted onto site by trained and competent staff and checks are done that include;

- waste quantities on the vehicle against what is recorded on the paperwork,
- weighing the waste and recording on the paperwork
- checking that no other unexpected waste has been sent with the Fluorescent tubes

Any issues raised during acceptance are raised and dealt with the customer via the non-conformance procedure.

Accepted waste receives an “incoming” sticker detailing the waste type, date received, sequential and individual waste tracking number and any applicable hazard codes.

Storage

Accepted waste is then stored in rows on the yard awaiting processing. Waste is then processed on a date basis with older stock prioritised for processing. The unprocessed waste on site is stored for a maximum of 6 months. Typically waste is not stored for any longer than one month.

On site Processing and onward processing

Waste processing happens under cover on site and involves donning respiratory PPE in case any of the glass tubes have broken during transit or storage. This protects against any mercury emissions from the containers. Emptying the containers one tube at a time and carefully feeding the tube in to the crushing equipment. This is done until the container is empty of all tubes. At the end of processing the container is swept out and any contamination is recorded, weighed and segregated.

The processed fluorescent tubes are crushed inside the machine, mercury is collected with the fluorescent powder collected in a drum. The metal end caps as well as the clean crushed glass are collected in other separate containers ready for sending offsite for recycling.

The drum of mercury contaminated powder is sent off to our sister company Enlightened Lamp Recycling where it is heated in a big over, the mercury evolves off and is then collected in a condenser. This liquid mercury is then processed and cleaned further through triple distillation and is sold as a product back to industry.

Recycling rates

	For 100 tonnes of CAT 13 (fluorescent tubes) received and processed;	Recycling Tonnages
94	Tonnes is crushed glass, at 97.9% recovery	92
3	Tonnes is metal & plastic end caps, at 95% recovery	2.8
2.8	Tonnes is phosphorous powder, Landfill after mercury removal	0
0.1	Tonnes is cardboard, at 95% recovery	0.095
0.1	Tonnes is other waste (waste not recycled).	0
0.05	Mercury at 95% recovery	0.05
100		94.9 tonnes
		94.9% recycling rates
Results generated August 2021 for processing at Mercury Recycling Ltd and Enlightened Lamp Recycling Ltd, both Mulberry Waste Group Companies		