

## What Happens at AmeyCespa?

At AmeyCespa we sort out lots of things that are thrown away as waste. These are the main things that happen here, at our Waterbeach site near Cambridge.

- **Composting**
- **Recycling**
- **Landfill**
- **MBT**

### Composting

There are two types of composting going on at AmeyCespa.

#### 1. Outdoor Composting

This is exactly the same as the composting you can do at home or at school. The only difference is that we chop up (shred) the garden waste and have huge compost heaps here, and this helps the compost get quite hot. Because it is outside we can't compost food waste here because it would attract pests like rats, but we take garden waste from the household recycling centres across Cambridgeshire and waste from businesses like tree surgeons and landscape gardeners. The final compost is used by farmers.

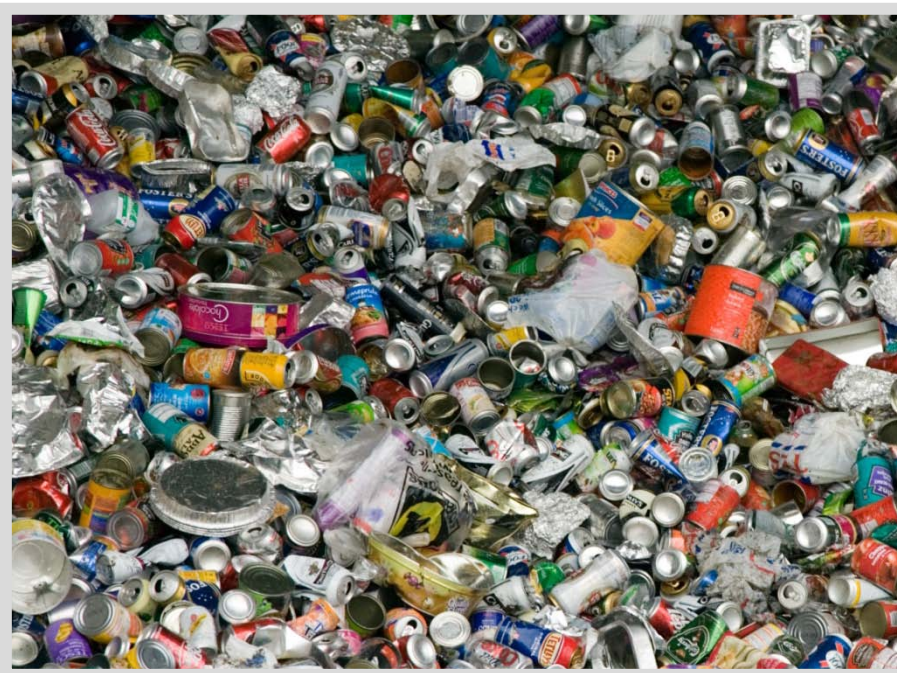


#### 2. In-vessel composting.

This is where all the waste from the kitchen and garden rubbish collection from your home comes to. The In-vessel composter is a row of big concrete bays with a removable front and roof. The plant and food waste is shredded up first and put into these bays. Then it is left to get very hot. It has to get up to 60°C twice in two weeks. This is to make sure that any bacteria that cause diseases are killed. Because this type of composting gets so hot it means that we can put food waste in it. The compost is covered by a roof to keep pests out, but help keep the heat in. After two weeks all the food waste has decomposed and then the compost can be finished off outside. This is very good quality compost and can be used by farmers and for gardens, schools and allotments.

## Recycling

When waste is sorted out into different things it can be used again. In fact it isn't waste at all, it is a valuable resource. At AmeyCespa bin lorries bring us paper, plastic bottles, cans and glass. We store it here and then it is taken to factories where it can be made into new things. For example the plastic bottles go to a factory in Essex and the paper goes to a factory in Kent. Plastic can be made into all kinds of things. In our education centre we have table tops made from old CDs, plastic coffee cups and plastic bottles. We have rulers, pens and pencils made from recycled plastic and there are even fleece jackets made from old plastic bottles.



Paper can be made into new paper or cardboard; glass can be made into new glass bottles and jars. A lot of old glass is used for making paths and roads as well. Metal is very valuable and can be easily recycled to make new metal objects, like cars, ships or new cans.

The building industry makes a lot of waste like wood, bricks, concrete and old furniture. Most of this can be used again, and we sort out a lot of this material from skip waste at our Waterbeach site. The bricks and concrete can be used for making roads, any metal can be recycled. Wood can be made into chipboard, or used to make animal bedding. Wood with paint on it can be burnt to make electricity.

## Landfill

All the waste that hasn't been recycled or used to make compost has to go somewhere. In Cambridgeshire, like most places, this waste goes into very big holes in the ground called "landfill". At AmeyCespa we are lucky because the land here is made of clay which doesn't let liquids out. Waste can produce a lot of poisonous liquid (called leachate) from things like rotting food, nappies, batteries, old tins of paint or weed killers, and this liquid must not get into streams or rivers.



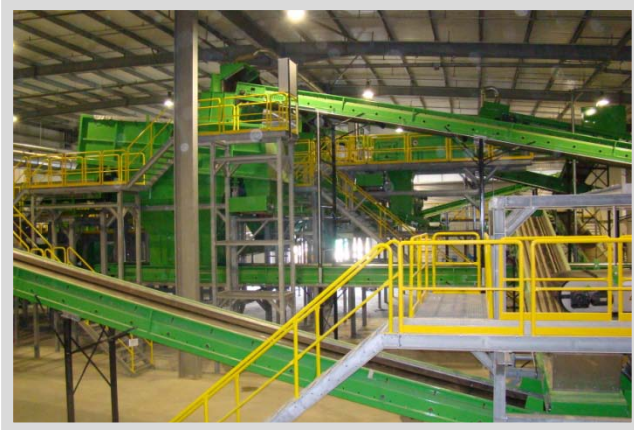
The waste is taken by lorries to the landfill holes which are lined with clay and dumped in. Then heavy compactor trucks drive over the waste with spiky wheels. This helps squash the waste down as much as possible. We can see that there is still lots of food in the waste that people throw away because of all the seagulls that live on our waste site. They are here to eat the food waste.

Food waste in landfill rubbish is bad news. It attracts pests like seagulls and rats, and makes a bad smell. When food waste rots without air it produces a gas called methane. Methane is very explosive so a landfill site with lots of methane in it is dangerous. We have pipes going into the landfill to let the methane out. However, methane is a very powerful greenhouse gas and is causing climate change. The best solution is to catch the methane and use it to produce electricity. Even better would be for everyone to use their food waste to make compost and grow more food!

When the landfill hole is full, we put more waste on it and make a "waste hill". Finally, we put a layer of clay on top to stop any waste getting out and rain getting in. It's a bit like making a pie. The clay is the pastry and the waste is the filling. The clay is covered with lots of soil and compost and grass is grown there. Birds like skylarks like to live on old landfill area.

## MBT - Mechanical Biological Treatment

We need to try and stop the large amount of waste going into landfill. In Cambridgeshire half of all waste is already recycled. It would be great if people could recycle even more of their waste, but before that happens we have built an MBT plant to help sort out the waste instead of it going straight to the landfill hole.



The MBT has lots of machinery that sorts waste for recycling and composting. Waste from council bin lorries is brought to the MBT plant, where it is put onto conveyor belts. Then the waste gets sorted. Magnets take out some metal (which sort?), and a machine called an eddy-current separator sorts out non-magnetic metals. Machines that shake the waste and have sieves (called hard particle separators) take out the glass and stones, and special infrared rays spot the different types of plastic and air jets blow them off. When all this has happened the material that is left is paper, cardboard, food waste and other green waste. This is shredded up and taken to a huge composting hall.

It is left here for 7 weeks and turned over by giant wheels to make sure that the waste material gets lots of air to help it compost. After 7 weeks we have a material which is like compost. However, it isn't as good as our other compost and we can't use it to grow food or use it in people's gardens. We might be able to use it to cover the landfill holes when they are full and grow grass and flowers there.

The MBT plant has a special built-in Education Centre, which has large viewing windows where you can see all the machines working that sort the waste and the giant wheels turning the compost and where you can learn more about recycling and composting.