

Case Study - Sligo University Hospital

On-site Composting



We're taking climate action

Background

As part of Sligo University Hospital's Green Campus programme the hospital installed a food composting machine onsite. This turns food waste from the hospital into compost. The composter currently takes 20 tonnes per year, about one third of the food waste generated at the 357 bed hospital. It is planned to use the compost throughout the hospital grounds.



Food is added via the chute. A shredder chops the food waste.



Wood pellets are added automatically when food waste is added; usage is approx. 3.5 kg per week.

The Process



The first chamber is where composting takes place, while the second chamber is for ripening.

Rotors in both chambers turn automatically to mix and aerate the compost. The material spends 2 weeks in each chamber, taking 4 weeks in total.



The end compost product is removed here and is used on campus.



The carbon filter bed to remove odours from the air

What can be added:

- ✓ Raw & cooked food
- ✓ Meat
- ✓ Fish
- ✓ Egg cartons
- ✓ Egg shells
- ✓ Coffee grinds
- ✓ Fruit and veg peels
- ✗ Compostable bags (as they can wrap around the blades)



The composter is located outside the hospital to the rear of the kitchen.

There is a larger model which can handle about twice the amount, 40 tonnes per year, but at 5.3m long, this required a larger foot print than was available

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INFORMATION DETAILS:



Annual Operating Costs:
Approx. €1,800:



- **Electricity:**
Approx. €400 per year
(945 kWh units per year,
at €0.43 per unit)



- **Wood Pellets:**
Approx. €180 per year



- **Annual Maintenance Fee:**
€1,250 (one full maintenance service
in the year and all call outs)



Processing Time:

SUH is running the unit at a slower rate than the design value, and plans to process up to **20 tonnes of food waste per year** in the composter.



Compost product:

The composter will produce 1 kg of compost for every 3 kg of material that is put into the unit. So 20 tonnes of food waste will produce around **7 tonnes of compost per year**.



Savings in Brown Bin Costs:
approx. €3,400 per year
(~20 tonnes at €169/tonne)



Things to consider:

- A 3-phase electricity supply.
- While there is no liquid effluent from the unit, being located near a sewer is **convenient for venting the carbon bed to air**.



Net Savings:
€1,550 per year



Advice for others:

Keep the operation of the unit to **one or two staff members**, and try to get them to take ownership.



Other Benefits

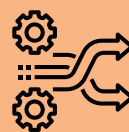
Carbon emissions from the transport of food waste to a neighbouring county are avoided

- Reduces food waste amounts sent off-site
- Contributes to green campus activities



Staff Time:

An estimated maximum **4 man-hours** per month to add the food waste, and to transfer and remove the compost on a fortnightly basis.



Day to day operation:

The one difference for staff is that they now split the compostable **bags of food waste into the composter** compared to the practice of placing food waste bags straight into the brown bin.

For further information contact: climate.action@hse.ie