

Case study Heating it up

Woodchip treatment facility at Westonbirt National Arboretum

In 2009 the plant disease Phytophthora ramorum was discovered at Westonbirt National Arboretum.

One of the ways this fungus-like disease could accidentally be spread would be to use the untreated woodchip created from the infected trees, as mulch around the arboretum.



Researching the best way forward

It was essential the site put in place some good hygiene procedures and robust biosecurity measures to prevent unnecessary spread of the disease.

The Westonbirt team sought the latest advice from experts in the field of composting and industry professionals, to work out how best to 'pasteurise' the woody material being produced on site. The result was a woodchip treatment facility that supports the process known as hot composting.





Hot composting

The process of hot composting is actually very simple and relies heavily on nature to do the hard work.

- **1.** Assorted freshly chipped material is immediately deposited into one of seven bays, filled to a depth of 1.5m and covered over.
- To achieve pasteurisation, the entire pile needs to reach a minimum of 45°C for five consecutive days or 60°C for three days. Three probes in set locations in each bay record temperatures daily, at depths of 30mm, 75mm and 120mm.
- **3.** Once the pile has reached the right temperature for the necessary duration, the steaming material is carefully turned into the next empty bay. The process is repeated three times. This ensures every piece of material gets to be 'hot composted'.
- 4. When the green material has turned brown, it's ready!



Keeping our arboretum healthy

The result is a high quality, hot composted material that can be safely used across the arboretum, as a mulch around both new plantings and mature trees, and for woodchip paths, without spreading any plant diseases.