



Biffa, Windrow Compost Facility

Derby

Advetec 2020 Case Study

**Biffa is one of the UK's largest waste processing companies and specialises in handling and recycling all types of waste and recyclable materials**

**One of Biffa's wind row compost facilities is located near Derby and is an area where a concrete hard standing has been established to lay out green waste collected from council and major road work contractors for the purpose of composting the green waste and producing re-saleable compost for commercial landscapers and other horticultural markets.**

**The process adopted allows for green waste to be hauled to site, shredded and then laid into rows of 150 metres long by 4metres wide and 4 metres high. The layout provides for vehicle access between the rows and the rows are typically turned every 7-10 days. No additional additives or moisture was introduced before the trial. The average time for composting was 18 weeks.**

**Background:** The facility was currently stretched to capacity and costings had been assessed to extend the footprint to allow double the current capacity. Due to the large cost of some of the modern composting systems and the extensive payback period, Biffa decided to evaluate the effectiveness of the Advetec product on production and profitability.

**Objectives:** The aim of the trial was to improve the following areas related to composting:

- Decrease composting time to PAS 100 standard.
- Ensure no PH deviation of finished product
- Ensure product CO2 discharge was equal to or better than existing
- Prevent excessive leachate

**Implementation:** A site wide survey was conducted prior to the Advetec dispensing units arrival. During the evaluation period samples were collected. Analysis was recorded independently by Biffa. The Advetec 2020 was dispensed once weekly for seven weeks as a fine mist spray from the dispensing unit which was towed behind a four wheel drive vehicle. The final compost samples were taken from the treated wind row, an adjacent windrow which had not been treated and a windrow that had been composting for 18 weeks.

**Analysis:** During the evaluation period the temperature and organic composition were monitored by Biffa staff.

**Results:** In direct comparison with wind rows laid at the same time from the same source material.

- The wind row treated with Advetec product degraded in compliance with composting standards within 9 weeks. The control wind row took another 13 weeks to achieve the same quality.
- In comparisons to the wind row that had been degrading for 18 weeks, the trial wind row material was of a standard much higher. The statistics showed a marked improvement in quality.
- In addition, since the facility was limited by physical size it could now receive a higher volume of green waste to process which would result in an additional **net** annual revenue of **£86.675**.
- During the trial it was noticeable that the leachate from the rows did appear clearer and that no noticeable odour was detected around the treated wind row.