

HotOff-THE-PRESS

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The importance of being aerated

The HotRot process is designed to operate at high efficiency ie feedstock is rapidly stabilised. If this is not being achieved it is almost always due to limitations in the oxygen supply to the process. This has been clearly demonstrated by recent work at two plants with differing feedstocks and goals.

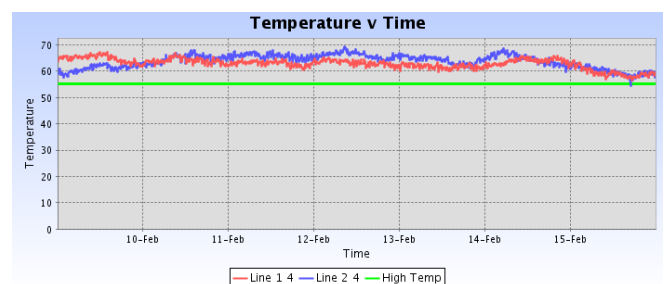
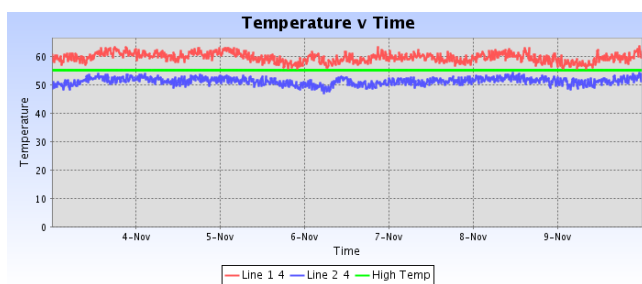
Example 1. The plant operated by Selwyn District Council processes source separated municipal organics and green waste. The green waste generally provides excellent structure to the feedstock. The plant consists of two HotRot 1811s in parallel which are fed identically. Until December 2008 HotRot 1 was fitted with air injection, but HotRot 2 was not. When the levels of food waste were high the aerated HotRot outperformed the non-aerated HotRot as shown in the upper graph for November 2008. After air injection was fitted to HotRot 2, temperatures in both units consistently exceeded 60°C as shown in the plot from February 2009.

Example 2. In an 1811 sited in Europe, a mix of fish and agricultural by-products was being composted. Windrowing these materials resulted in good temperatures, but the process took many months. The HotRot process was considerably faster, but temperatures were generally only just thermophilic (45°C). Air injectors blocked frequently and, even when cleared, back pressure on the injector blowers was high indicating that the material was difficult to aerate. Adding woodchip to the mix (20% by weight) to increase porosity on 28 January 2009 caused a significant and sustained rise in temperature (65°C +) and also improved other performance criteria.

In both these examples the material being treated was eminently compostable, but for differing reasons it was difficult to supply enough air to allow the process to proceed at a sufficient rate to achieve good temperatures. As a result of the steps described, both of these plants are now able to convert putrescible wastes into a product with low odour and good properties within two weeks.

COMPOSTING SYSTEMS

HOTROT®



Above: Temperature graphs for Selwyn District Council HotRot before (left) and after (right) installation of air injection

Hitting the high wire

Christchurch HotRot staff spent part of their recent team building day at Adrenalin Forest. This multilevel aerial obstacle course is designed to challenge participants' balance, agility and confidence. All team members completed the first five pathways, with only the two most intrepid venturing onto the sixth and final pathway to tackle the toughest obstacles more than 20 metres above ground level.

'The highlight of the day for me was the way the lads on the team encouraged and supported me when I hit a tricky obstacle and ran out of energy', says Office Manager Sue Townsend. 'That gives me confidence that no matter what obstacles comes our way we can face them as a team.'



Eight years of nonstop HotRot service



The first commercial HotRot ever installed has been continuously composting sewage grit and screenings for the Palmerston North (NZ) City Council's Waste Water Treatment Plant since February 2001.

As part of a site rationalisation, the unit was recently emptied, and moved to a nearby landfill site where its use will be expanded to include food residuals and possibly disposable nappies.

NZ HotRot staff took the opportunity to inspect the HotRot 1509 as part of an upgrade assessment for the PNCC and are pleased to report that it's in great shape.

Key observations were:

- The frame and body are almost as good as new, demonstrating the value of zinc-arc surface coating.
- The tines and shaft show minimal wear and are structurally sound.
- The stainless steel inner bears some not unexpected minor 'dents' but is also basically sound.
- The central bearing and supports have worn significantly and some bending of adjacent tines has occurred due to the 'barrier' caused by bearing and supports. This evidence supports the design changes made 6 years ago to remove the central bearing from all future steel units, and move to a one piece shaft. Replacement of the bearing supports is not a large task for the first major overhaul the unit has required.

Overall we were delighted with the condition of the unit, given its continuous and trouble free life to date in the historically challenging environment of a Waste Water Treatment Plant. We will keep you updated on phase two of this unit's life as it progresses towards middle age!

'This has turned out to be the ideal solution for us providing us with massive savings, an improvement in our environmental credentials and a useable product at the end. I would recommend HotRot and their systems to anyone producing a large amount of organic compostable waste ...'

Testimonial from Claire Pipe, Conservation Officer, Twycross Zoo, UK

For the full testimonial from Twycross Zoo visit our website and select the **Documents** page

HotRot UK – at the heart of the action (ctd)



The latest addition to the HotRot family is Jacqui Merryweather, Office Manager for our UK team. Jacqui comes from a varied administrative and business background, including roles as legal secretary, school secretary, real estate agent and administrator for a professional theatre company. In addition to career and raising a family she has also found time to complete a BA in Humanities. Jacqui loves her role with HotRot for its variety, and she has rapidly become a central part of our UK operations due to her outstanding organisational abilities. Outside work she actively supports her teenagers' participation in basketball and is currently Team Manager of the Ipswich Bobcats.



After taking early retirement from his role as CEO of BP Ventures, Iain Steel turned his attention to new business start-up consultancy with a focus on organic waste processing as a potential area for growth. Internet research identified HotRot as the most robust of the in-vessel composting technologies on the market. Iain played a foundation role in the establishment of HotRot operations in the UK and is now employed part time as our UK Technical Sales Agent.

'In-vessel composting has taken longer to be adopted in the UK than many of us thought, but of the competing technologies HotRot is a wonderful business prospect', Iain says.

Go to our website to see where the HotRot team will be next ... <http://www.hotrotsystems.com>
Until next time Keep the earth turning with HotRot!

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