

Getting bang for your buck – Bunbury's grants journey

By Jacqueline Ong

APPLYING for a government grant is no doubt a tedious, lengthy and often risky affair.

Putting together an application requires thorough planning, research and consultation and, for many smaller regional councils, budgetary constraints and geographical challenges means having to source for infrastructure that does not require a large capital investment, one that provides value for money and complements unique factors such as feedstock, end markets and population.

For many councils, food and organic waste continues to climb steadily up the policy agenda, evidenced also by year-on-year increases in state and local recovery targets.

To help local governments get

processing facilities off their feet, a number of state governments have provided organics infrastructure grants.

Despite the availability of funding, the issue at hand for smaller regional councils is the high cost of composting and alternative waste treatment infrastructure.

This causes an added headache when applying for grants as councils need to find a solution that ensures they do not have to provide a large capital investment on top of the funding awarded, so as to see return on investment quickly.

Two years ago, the Bunbury-Harvey Regional Council in Western Australia embarked on a grants journey, on behalf of the Bunbury-Wellington Group, from the WA Waste Authority (WAWA) for a large organics diversion infrastructure project.

WAWA told *Inside Waste* that the application it received from the council addressed and met all the objectives of its regional funding program for local government authorities and featured "significant research, planning and public consultation".

Not only was the council's application lauded as a good example that other councils should learn from, just two years on and the project is close to seeing a return on investment.

Bunbury-Harvey's application

Like many councils, Bunbury-Harvey was facing a landfill diversion crisis when it decided to apply for the grant.

Its municipal solid waste diversion rate at the time was about 25% – 5% short of the state government's 2015 target for regional WA.

Council CEO Tony Battersby said

organics was identified as the most obvious waste stream to tackle but instead of simply managing green waste, the council decided to bite the bullet and confront the bane of most councils' waste departments – food waste.

"We could have opted just to do green waste and leave food waste out of it but that would have only been half the effort," Battersby explained.

"We decided, let's just put one system in place and put that in properly. If it's working in the eastern states, why is WA any different?"

The council wasn't simply looking to run a pilot program. It needed a long-term food waste solution for the region, one that was sustainable. Battersby knew that putting together a sound business case was key.

"The challenge was having the business case and studies and ►

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The affordable MAF system can be scaled up easily.

background research behind us to make sure we covered all our bases," Battersby said.

"We did a lot of research, we even toured the eastern states where these organic facilities were set up for a third bin application."

The council also undertook a number of audits on its waste streams to ensure it had explored all available options.

"With the audits, we fully understood what our waste streams were, what they're made up of and we also made sure it was truly a regional project and not just for local government," Battersby said.

According to WAWA chairman Marcus Geisler, this was vital.

"It is essential for all members of a regional grouping to share an agreed common goal," Geisler said. "The Bunbury Wellington Group can draw upon years of experience in undertaking

thorough preparation for a project of this scale.

"The additional benefit of such a mature grouping is the cooperation of all member local authorities."

Battersby pointed out the one thing the council had never done in its previous applications, which was to apply for a number of grants at one time. This, he said, was something he'd advise other councils to do.

"You certainly don't want to put all your eggs in one basket. For this particular project we actually applied for three different grants," he said.

"In applying for grants, it really depends on the time [you apply] and political atmosphere.

"Different grants will be looked on more favourably at different times, depending on where the government or funding agents sitting at the top want to spend their money at the time."

Choosing the right infrastructure

Right from the start, the council made it clear that this was not simply a "feel good" project and that the group was in it for the long haul.

As the council had some in-house savings and future waste strategy reserves, it could purchase a third green bin for residents as well as a new truck for the additional collection service without any additional cost to the ratepayer – a win for the council and community.

Despite the savings there, the council still wanted to make sure the equipment chosen to process the waste would maximise the funding it would eventually receive and deliver a quality product that it could sell.

Battersby and his team looked at a number of different composting technologies, including in-vessel and windrow systems before deciding on the mobile aerated floor (MAF) system.

The German-developed MAF static pile composting system is distributed by C-Wise in Australia. It is a mobile system that can be scaled up easily and one of the main drivers for the council was its affordability.

"The cost of composting equipment that we looked at ranged from the \$20 million starting point to, basically, the sky's the limit. So a major factor for us was the cost of setting this up," Battersby said.

"Typically an AWT costs tens of millions of dollars and requires large volumes of wastes. Regional communities or smaller city councils do not have the population to justify these investments and need alternative solutions," C-Wise director Andy Gulliver explained.

"For the Bunbury-Harvey Regional Council, we targeted 10,000 tonnes

of third bin collections a year. The total cost of the project was about \$2 million, which is a fraction of the cost of big box AWTs."

The MAF system's smaller price tag means the council can produce compost at a significantly lower cost compared to the typical cost – upwards of \$150 a tonne – allowing the council to offer the product at a price customers are willing to pay.

Another benefit, according to Gulliver, is that the MAF system can be added to an AWT process, providing a cost-effective way of increasing the capacity of AWTs.

"The MAF system can easily be retrofitted to poorly performing maturing halls or added to existing tunnel installations to increase capacity and lower costs," Gulliver said.

The MAF system has the capacity to process 12,000t of waste a year and the council is processing about 9000t.

While expansion is on the cards, Battersby said the final piece of the puzzle would be marketing the end product and looking at adapting the end product to suit a variety of uses, such as agriculture and minesite rehabilitation – a rule that Gulliver abided by.

"One of our rules is, work from the market backwards. We always help our customers consider the end use of their product to ensure the whole supply chain is considered before committing to invest," Gulliver said.

"We are also very particular about ensuring the customer invests in people. Operators attend a 'MAF school' over several days and are given the knowledge and skills to operate a composting system. This is followed by ongoing support and connection to a growing family of composters." **iw**

Typical operations in Bunbury-Harvey

#1 MSW is delivered to the facility where loads are visually inspected and major contamination removed. Contamination levels sit at around 5%.

#2 Organics are blended with mulched green waste and immediately placed onto "stage zero" of the MAF system. Putrescible food waste is under control within hours of arriving onsite. Batches are accumulated over a two-week period.

#3 The batch is then blended and relocated onto stage 1 where it remains for two weeks.

#4 Water is added if needed and the batch is cross mixed. The material is located to stage 2 where it sits for a further two weeks.

#5 Finally, the material is relocated onto stage 3 for two weeks and again, water is added as required.

The council monitors and records moisture and temperature levels at each stage and if the material becomes wet due to rainfall, it can modify the running time of the system to increase evaporation rates.

After stage 3, the material is stockpiled and ready to be screened using a trommel. In the initial stage, it is screened to 50mm to produce a mulch. Contaminants can be sent to landfill and oversize organics can be returned to stage zero.

A second screening process, with a 10mm screen, produces a fine product for soil conditioning. Samples are sent to a laboratory to be tested against the Australian standards.