WHAT WE LEARNT, WHAT WE COULD DO BETTER





This document was produced as part of two grants from the NSW EPA for the rollout of FOGO (Food Organics Garden Organics) to around 12,600 households in the Bega Valley Shire on the Far South Coast of NSW. The Shire is spread over 6,000 square kilometres and contains 225km of the NSW coastline.

For further information about the contents in this report please contact the Bega Valley Waste and Recycling Team on 02 6499 2222 or email council@begavalley.nsw.gov.au



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FOGO IS HERE IN THE BEGA VALLEY

On October 29, 2018 Bega Valley Shire Council introduced the FOGO (Food Organics Garden Organics) bin collection service to 12,600 urban households. This was the most significant change in bin collections for the shire since first introducing recycling bins.

Before FOGO, bin audits showed food and garden waste made up around 40 per cent of the weight of waste in the red lid bin going to landfill. This accounted for about 1000 tonnes of organics waste per year that we knew we could be recovering and processing into compost at our newly-upgraded Merimbula organics facility.

In our first year of FOGO we diverted more than 5000 tonnes of food and garden waste from landfill. This is a drop in household waste to landfill by 30 per cent since the introduction of FOGO. These figures have far exceeded our expectations and tell us we are definitely on the right path. Our community was ready and willing to embrace the change and these results demonstrate that. Our FOGO contamination rates are around 0.4%, among the lowest in Australia. However, we are not resting on our laurels and know there is still plenty of work to be done.



WHY DID WE NEED FOGO?

In the Bega Valley it is particularly important to divert as much waste, including food waste, from the landfill that we own and operate near Wolumla. The Central Waste Facility was built in 2015 with an expected lifespan of 27 years, however at our current fill rate, we will be lucky if this lasts for 18 years. Either we need to reduce the rate we are filling it or bring forward the cost to pay for a new one. The site costs around \$20 million and operating costs are another \$1 million per annum on top of that, costs that ratepayers bear.

In addition to the economic costs of landfilling food there are considerable environmental costs. Methane, a highly concentrated greenhouse gas, is produced once food waste breaks down anaerobically. Landfilling wastes the nutrients in the food and they can never be recovered.



FOGO captures the nutrients in food and turns it into compost, and delays the need to build new landfills.

WAS IT A GOOD DECISION?

Absolutely! Many people were surprised at just how easy it was to implement FOGO in their own homes and some were happy to reduce their red bins to an 80L even though they were picked up fortnightly. One customer called to say their red and yellow bins now go out every fortnight around '3-4 inches full'.

"I didn't realise
how little rubbish
I would generate
when FOGO came in.
It's not hard."

Our FOGO team surveyed 20 visitors at a community market day three months after FOGO started. All thought it was a great idea, and all had heard of FOGO through caddies, signage around their holiday accommodation, with the exception of holiday parks which do not yet have the service. Many said they would love to get FOGO in their own councils. We receive regular calls from councils and waste reduction businesses about how to GO FOGO. We also get tagged on social media by visitors who compliment the Bega Valley for providing the FOGO service in their accommodation.





HOW COULD WE AFFORD TO DELIVER FOGO?

In 2017 Bega Valley Shire Council received two grants from the NSW EPA totalling \$671,400 for the delivery of a FOGO service to Single Unit Dwellings (SUDs) and Multi-Unit Dwellings (MUDs). This grant covered delivery of caddies, marketing of associated changes to the community, and food waste avoidance activities. The council contributed in-kind by creating and filling three temporary positions to support the rollout, providing compostable bags. A separate Lessons Learnt document will also be available specifically for MUDs.

As well as its urban three-bin services, the Bega Valley has 4000 two-bin services (weekly landfill and fortnightly recycling) for rural residents. We were clear from the beginning that rural residents would not be getting a FOGO collection service, but it was important that FOGO was communicated as one piece of the bigger picture to change the way everyone in the Bega Valley thought about waste. As such, the roll-out of FOGO coincided with broader waste campaigns and messages with the central message of 'choose the right bin'.



choose the right bin



LESSONS LEARNT

One of the activities we undertook was contacting individual councils who had introduced FOGO to review their lessons learnt, and hope that this document can be a valuable resource for others to save this time-consuming step. We learnt a lot through this process and overcame several challenges including a natural bushfire disaster while also achieving incredibly positive outcomes.

We have also created a page on Council's website where you can download resources such as brochures, fact sheets, posters, bin stickers, films, online resources and newspaper ads. You can use these as a guide to develop your own FOGO campaign material. We were fortunate to have had the grant support from the NSW EPA to deliver FOGO and we are keen to share the resources we were able to develop.

As a Council, it is our responsibility to provide our ratepayers with the knowledge, confidence and support to change the way they think about waste. This is because everyone benefits – it saves money and in the words of one of our young Bega Valley Waste Warriors 'it saves the planet'.



HOW DID WE GET HERE?

The FOGO journey goes back as far as 2012 when the Bega Valley Shire Council introduced a four-weekly collection of garden waste (green bins) to around 12,000 urban households. With a long-term vision of reducing waste to landfill and returning this green waste back to the environment via compost, in 2016 we started refining the composting process at our Merimbula site. This allows us to sell a high-quality compost product back to the community and use it on public spaces such as parks, reserves and sporting grounds.

Bega Valley Shire Council's 10-year Waste Management and Resource Recovery Strategy (2018-2028) 'Recycling the Future' identifies diverting waste from landfill as one of its key priorities. But how do we best do that? The Waste and Recycling team recognised that engaging our community and getting them to take their own action would be critical in delivering our strategy. In 2017 we developed a communications and marketing plan that used a variety of innovative and most importantly, engaging techniques to get our community on board with broader waste actions. These were the essential building blocks to underpin our planned introduction of FOGO.



		PLANNING FOR FOGO
2012	>>	Introduce green bins
2016	>>	Start composting green waste at Merimbula
Early 2017	>>	Form community-led Waste Strategic Working Group
Early 2017	>>	Develop broader Waste & Recycling communications strategy, including FOGO
May 2017	>>	Apply for EPA grants to deliver FOGO
May 2017	>>	Launch free waste APP with Mayor in her PJs campaign
June 2017	>>	Apply for licence variations to accept FOGO at Merimbula Organics Processing Facility
July 2017	>>	Call for tender, new waste contract
July 2017	>>	Start WasteThe Facts Facebook community
July 2017	>>	Build relationships and trust via Councillor engagement, WasteThe Facts campaign
July 2017	>>	Start working with FOGO ambassador (Costa Georgiadis)
August 2017	>>	Councillors vote unanimously for FOGO
August-Dec 2017	>>	Communications Strategy & Concepts developed/finalised
February 2018	>>	Call for tender, kitchen caddies
Early Feb 2018	>>	Community callout for Waste Warriors for TV/film campaign
Late Feb 2018	>>	Filming for The FOGOmentary and TV campaign starts
June 2018	>>	Finalise artwork and order kitchen caddies
July 2018	>>	Update waste collection zones, APP upgrades for FOGO
August 2018	>>	Announce FOGO start date
August 2018	>>	Launch 10-year waste strategy
August 2018	>>	Face-to-face Drop In sessions for accommodation managers in holiday towns
Mid Oct 2018	>>	Start delivering kitchen caddies
October 19 2018	>>	Launch The FOGOmentary to create momentum for when FOGO starts
October 26, 2018	>>	FOGO starts, Waste APP upgrades live
December 2018	>>	FOGO education campaign for tourists
December 2018	>>	Congratulate community for low contamination rates, FOGO wins compost award
2019	>>	Keep momentum going for FOGO and broader waste awareness, launch new projects, FOGO wins 5 awards, FOGO thanks our community for more than 5000 tonnes diverted in year one

FOGO CREATES MOMENTUM FOR NEW INNOVATION

COMMERCIAL CUSTOMERS:

We have run a trial with businesses in Bermagui to see how FOGO could be delivered in a commercial setting. This will be rolled out to other businesses.

 CLUBS, NURSING HOMES AND AGED CARE FACILITIES:

We have a one-year trial (starting March 2020) in three nursing homes/aged care facilities to test food waste dehydrators, with the aim of this being able to extend to clubs and large restaurants.

• WASTE WISE EVENTS:

We have launched a starrating system with our grants program for event managers to strive for at their events. To support this we will have made customised festival bin banks to help patrons choose the right bins. Event managers also have volunteers at the bins to help separate at the bins, and also sort through waste after an event. • SUPPORTING NEW INNOVATION: In a first for the state, and possibly the country, a new initiative based in the Bega Valley is turning fish waste produced from fishing into organic garden compost. It's great to see people come up with innovative and practical solutions to waste problems, which are not just Council problems, they are whole-of-community problem. We've seen great innovation in our shire and a willingness by our community and visitors to embrace change through the introduction of the FOGO bin collection service in our towns. Improving the facilities at these six boat ramps and supporting the Ocean2earth initiative is another step towards the long-term goal set out in Council's 10-year waste management strategy.



At the Ocean2earth Australia launch, from left: Anthony McMahon – BVSC Director Assets & Operations, Tim Crane, Cr Kristy McBain, Kyran Crane, Joley Vidau – BVSC Waste Management Coordinator, Cr Mitchell Nadin, Cr Tony Allen.

 SCHOOLS: Before FOGO we already had well established garden and waste separation programs in schools, and through continuing partnerships with the Bournda Environmental Education Centre these programs are reaching new heights.



St Patrick's Primary School in Bega is one of many schools that compost and garden, supported by grants from Council's waste education fund.

• FOOD DONATIONS PROJECT:
Council is supporting the Sapphire
Community Pantry in Bega, also known
as The Pantry. The project will increase
the amount of food donations to The
Pantry and further reduce the amount
of food going to landfill.

COOKING WITH LEFTOVERS:
 We have developed a video and printed series of recipes with much loved author Jackie French and community members at Eastwood's Deli and Cooking School. These focus on cooking with leftovers and storing stuff right.





WHAT DID WE LEARN?

We are covering key areas which were pressure points for our roll-out of FOGO to provide some tips and information that may help you.

START PLANNING EARLY

Use the opportunity to look at your long-term goals for waste. Our Waste team was keen to be honest and upfront with the community about all waste matters to encourage them to provide solutions as well as deliver solutions of our own. Behaviour change needs to come from the community, from the bottom up. So we needed to provide the tools to help them proactively be smarter with waste, long before we implemented FOGO.

Our first priority was to develop a customised smartphone APP. Bin reminders are one of the key features. Others are tip opening times, a recycling guide, notifications of when compost is available, reporting missing or damaged bins. All this information is available on Council's website but we recognised that the website is complex to navigate, and the APP more responsive and user friendly.

The Bega Valley Waste APP launch in May 2017

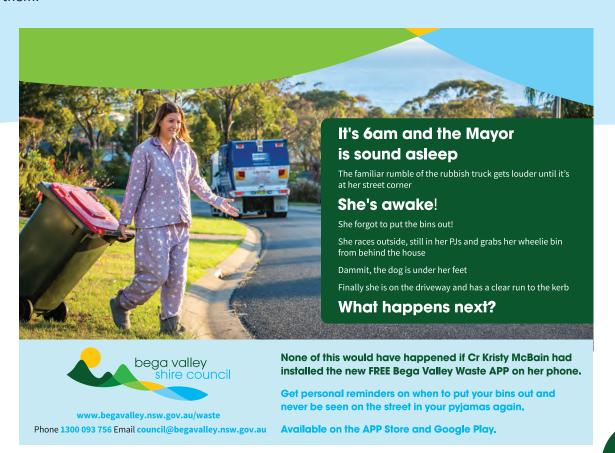
The APP took on extra significance for our longerterm plan towards FOGO because we knew that when FOGO started we would have to manage collection issues due to weekly red (landfill) bin collections going to fortnightly, and monthly green (organics) bin collections going to weekly. We also changed zoning as part of a new waste collection contract, resulting in 350 new properties in the garden organics collection zone, so we needed to make sure our community had access to the correct information about bin night!



WHAT WORKED

- To launch the APP (with new APPs getting launched every day) we needed to find a way to cut through the ordinary and lift into the extraordinary. We simply did this by making the community's elected Mayor real. We developed print, online and radio ads to reach a broad audience, and our community loved it!
- We knew the APP had shortcomings so we soft-launched it to the community and asked them to tell us what worked and what didn't.
- The APP has paved the way for significant annual cost savings in the production, printing and mail out of our bin collection calendars, essentially saving council \$17,000 each year.
- Not everyone wants to use an APP, so we still provide other options for the bin collection calendar including an online calendar on Council's website and a printed calendar that people can collect from the Council office, libraries and tips or order to be mailed to them.

- The APP took some time to develop, and during the development stages Council made decisions on how the collections calendar would function, which caused confusion for residents.
- Council should have used the standard approach as offered by the APP development company to determine which bins get collected which days. Extracting every single address and setting up the zones should have been our approach.



UNDERSTANDING OUR COMMUNITY

Understanding the demographics played an important role in the success of this project and guided the way we communicated with them. The Bega Valley is made up of beach and bush and mountains, and everything in between. Tourism, particularly holiday units and accommodation, make up one of the largest sectors in our shire, along with farming and retail. There are a large number of retirees, and young families. These each presented different challenges to consider prior to the FOGO rollout and we needed to understand how the change to a FOGO service might impact on each group.

As part of the waste collection contract prior to FOGO, about 360 properties identified as 'within town's limits', within the 50-60km per hour zone, were allocated a garden organics bin service, that would transition to FOGO. Most were reluctant to participate due to increased bin collection fees and most said they managed their garden and food waste onsite (compost, chickens, pigs, etc).

Once FOGO started for those urban residential properties that had a FOGO kerbside collection:

- 1. The green bin went to a weekly service (from 4 weekly)
- 2. Red bin from weekly to fortnightly
- 3. Yellow bin to remain at fortnightly.

This meant that over a four-weekly period, there would be one additional bin pick up for no additional cost.

One key concern for many residents was the red landfill bin changing from weekly to fortnightly. This was particularly relevant to families with children in nappies, people with medical waste and holiday accommodation managers or owners.

WHAT WORKED

Families with children in nappies

For families, our first approach was to visit families who requested a bin trim and guided them how to sort their waste into the correct waste streams. Three bin audits occurred and all reduced waste to one 140L red bin, or less. We also provided fact sheets on how to deal with the nappy smell, and reduce the volume of nappies.

Medical needs

For people with increased waste due to medical needs the decision was made to allow residents with genuine medical waste needs to have a weekly service which they would pay for. A medical waste form was prepared for completion before being signed by their medical practitioner.

Food businesses

Many restaurants, cafes and food businesses were interested in getting a FOGO service. We trialled a couple of food businesses with 240L FOGO bins, and one juice business had their green bin rejected because the truck couldn't pick it up (the arm on the collections trucks can pick up weights of up to 80kg, once this is full of food waste, the bin weighs much more). We commenced a trial of businesses in Bermagui with a number of smaller FOGO bins (140L) in early 2019. The response so far has been very positive, and some participants have indicated that they can reduce the number and size of bins. Businesses now have more interest in sourcing compostable products, e.g. coffee cups, cutlery.

- Ensure policy and paperwork for medical needs weekly service agreed upfront.
- Process for dealing with food waste from food businesses addressed and charges for collections contractor agreed upfront to avoid delays in getting businesses on board with FOGO.
- Bin sizes: ability to offer a number of different bin sizes for red, yellow and green. Promote upfront. Particularly for those who are elderly and may not be able to manoeuvre 240L bins. Ensure that waste charges are agreed prior to changes so they can be applied.

APPLYING FOR GRANTS

WHAT WORKED

Council engaged an external consultant to prepare the two EPA grant applications to deliver FOGO. The consultant was able to draw on their professional experience, which we didn't have within our team, to write the application in simple, concise language and avoid too much unnecessary detail. Council has since applied and successfully received additional funding now that we know the language and style required.

WHAT COULD IMPROVE

We requested funding for some items such as the education activities, where we should have extended the timeframes. Due to unforeseen events and new ideas that developed as we gained different insights into the planned rollout, we would have benefitted from more flexibility to move spending across to the marketing budget.

PRE-FOGO PROJECT TEAM RESOURCES

WHAT WORKED

Well before we put our FOGO launch into place we engaged an external media, communications and marketing consultant who could deliver a range of outcomes in partnership with our internal resources. This brought new ideas and new skills to Council, which helped lift the visual appeal of our marketing and deliver on projects that we simply didn't have the capacity to deliver.

We also employed a FOGO project administration officer and two support staff to deliver specific deliverables of the grant.

WHAT COULD IMPROVE

We would have engaged a dedicated FOGO project administration officer much sooner than we did, as well as the support staff.

The administration officer was required to prepare and submit grant reporting (financial and performance related), collect and analyse performance data, provide project support to the Waste Management Coordinator, then manage the rest of the implementation post go-live. This role also prepared strategies for how to deliver FOGO effectively to MUDs, how to manage contamination, trial plans for pre-processing technology, and develop bin trials for reducing flies. This officer also contacted 20 other councils to identify issues and provide solutions for our own setting.

As it got closer to the launch of FOGO there were a lot of time-specific pressures and deadlines and we needed all hands on deck. If we had engaged these staff earlier we would have been able to be more proactive in our communications and addressed more issues before they arose.



USING SOCIAL MEDIA EFFECTIVELY

The Waste Team are big advocates for using Facebook to disseminate information quickly and effectively. We made the decision to create a dedicated waste and recycling Facebook page to make it easier for the community to access waste-specific information. We did this before FOGO started to gather followers and establish the way we planned to communicate – openly, honestly, informatively.

WHAT WORKED

- We always have trusted and knowledgeable people to manage the page. Our focus was on engaging with the community, meaning that we made a commitment to respond to all comments/messages within three hours, even on weekends.
- We set the tone and language we work from the bottom up not the top down. We are here for our community, so what can we do to help?
 Posts are well-timed and written by subject matter experts.
- We used the page to gauge our community's concerns/questions and it fed into our FAQs that we published on Council website and in printed material as part of introducing FOGO.
- The page has also helped us make improvements to the Waste APP and general communications as people have identified their problems in sourcing correct information.
- It is okay to repeat information, so we regularly 'recycle' our posts around how to choose the right bin.
- Part of our behaviour change focus is celebrating community Waste Champions – when we celebrate, others celebrate and they also get new ideas for what they can do.
- During the FOGO rollout posts included: alerting residents of when they can expect caddy deliveries in their area, what bins go out on what day, how to open the compostable bags, and delivering the great news of the low weekly contamination rate over the first few months. This created fantastic conversations and momentum for FOGO.

 Social media can create difficult and confronting conversations and people aren't afraid to be critical – we weren't intimidated by this, and neither was our community. A lot of the time other people jumped in to defend FOGO and this ended up taking a lot of the sting out of our critics.

- Overall responses to our Facebook posts were positive, however, some negative responses appeared by serial trolls. Those involving coarse language were later deleted, however in hindsight having a filter for this language would have been appropriate from the start.
- Careful consideration needs to be taken when you are working within a large Local Government organisation with various departments. You need whole of council support for creating sub brands within your council and careful consideration of how you are going to manage that page.
- We took a risk with naming the page Waste...
 The Facts which has an acronym of WTF. This
 caused some concerns internally. It was a
 risky move to take this approach but it worked
 extremely well in raising awareness for our
 dedicated waste messaging.
- We created a new logo for Waste...The Facts within the Council's style guide, although it does move slightly away from the traditional brand of Council. There has been some concerns internally about the logo and its use, so we will need to revisit this as part of a broader whole of council branding review.

FOGO BRANDING

WHAT WORKED

- We made the decision to create a new FOGO logo and supporting graphics and branding that we could use on all FOGO-related brochures, signage, fact sheets, online media resources and on FOGO collection trucks. It was important that this could stand alone but that it could also be used comfortably with Council branding guidelines. This has been a great decision which we recommend.
- We have used a photographic image with layers of photographs of what can go into the FOGO bin and our brochures, signage. We also did a similar photographic image for recycling, landfill and fish bins. These images are striking and create a fantastic visual impact particularly on large-format signage.

WHAT COULD IMPROVE

- Although the layered photos are visually striking and stand out on large format (vehicle) and bin signage, they don't communicate clearly exactly what can and can't go into your bin.
- What can go into your FOGO bin information uses illustrative drawings of food and garden waste. We are now moving more towards using photographs of what can and can't go into each bin. Ongoing questions to our Facebook page regarding what goes into FOGO highlights that we need to make it clearer visually for people if we want them to choose the right bin, so these illustrations will be phased out.
- Our initial fish waste image uses fish species that are not in our region. We have since updated to local species as part of our involvement in the ocean2earth Australia project which is collecting fish waste from busy boat ramps to make into compost.

Council developed strong and consistent branding for all community education and information materials for the introduction of FOGO, including a FOGO logo. Continued use of this consistent branding for all waste and recycling education is essential to ensure clarity and understanding that Council is dedicated to providing all the facts about waste.



DECIDING THE BEST WAY TO INTRODUCE FOGO TO THE BEGA VALLEY

WHAT WORKED

- Build on existing relationships. We already
 had positive and established relationships
 with schools via our waste education grants,
 so it made sense to try and tap into those
 relationships as part of launching FOGO.
 Change is easy for children and when it comes
 to waste they are the most savvy sector in our
 community. This is how we came up with the
 idea of using local children in our television
 advertising campaign and all associated
 marketing.
- Get the community excited. We put a call out via Facebook and direct to schools for children to audition for our FOGO TV ads this brought in a lot of new faces to our television filming. We didn't anticipate that so many would apply (around 50) but we believed that by including them all and not narrowing them down, we would amplify the reach of our campaign because their parents, grandparents, aunts and uncles, cousins and friends would all be excited to see them on television.
- Have a strong ambassador. We already had a relationship with Costa Georgiadis who was a regular visitor to the Bega Valley and who was very interested in what we were doing at our organics processing facility with green garden waste. We were extremely fortunate that he embraced the opportunity to be our FOGO ambassador and generously share his time and his knowledge to help us launch FOGO in the Bega Valley.
- With the combined power of our young Waste
 Warriors and Costa, we decided we had enough
 footage to put together a short documentary
 which evolved into The FOGOmentary. This
 gave us an opportunity to create an 'event'
 which was the official premiere launch attended
 by over 300 people, that announced strongly
 FOGO is here in the Bega Valley!

 Because we had put in the preparation and planning and knew our community well, everything aligned for a successful introduction of FOGO. Our communications program was unique to our region, and that was the key to its success – know your audience and tailor your communications to them.



Gardening Australia host and passionate ambassador for Bega Valley Waste and Recycling Costa Georgiadis with Eden 'dirt girl' Lexie who appear together in a documentary council produced as part of its FOGO introduction.



- Initially we went down the path of creating a FOGO family, using animation. We made several attempts to develop this concept using both illustrated and real bins, and it wouldn't gel. We scrapped this idea and went back to the drawing board which was the best decision we could have made. We realised that the KISS principle really is better

 we didn't need to create a FOGO family using bins when we had real families in our community who were so eager and willing to be involved!
- With our communications plan and timelines shifting and changing, it was challenging to keep everyone up-to-date internally. We did stumble a few times at management level by creating some confusion around what we were doing and how it was going to look. The management team placed a high level of trust in our ability to deliver something fabulous.
- Shifting timelines created a lot of headaches with delivering key communications milestones, although many of these were out of our control. These included the Tathra, Reedy Swamp and Vimy Ridge bushfires in March 2018, which stalled our FOGO planning due to staff being needed to manage fire waste and asbestos recovery.

ORGANICS PROCESSING

Processing method

The equipment purchased for garden organics processing was not appropriate for the material. It was initially planned that we would process garden organics using windrow turners. Fleet purchased a pull-behind windrow turner, tractor and water cart for this process, however, hadn't fully considered the relationship between the equipment and site as we hadn't composted previously. The actual volumes of garden organics received was in excess of what the windrow process could take on the site.

As a result Council identified that the windrowing process was not going to work for FOGO, and the process transitioned to a mobile aerated floor (MAF) composting system. Once the decision was made to transition to a MAF method and paperwork was in order the site infrastructure was developed. This included provisions for power, water and irrigation.

WHAT WORKED

- We developed a good working relationship with Fleet Facilities and the workshop and were able to avoid downtime and interruptions by defining what we wanted. Equipment was leased from C-Wise (fans and pipes). We followed all the manufacturer's instructions and advice for how to use the equipment and haven't deviated from that.
- Onsite training for all staff that would be involved in processing was provided by C-Wise. This was crucial in our success and involved direction and instruction on the use of equipment and utilised C-Wise's consultation services.



From left, Bega compost crew Michael Randall, Glenn Alexander and Luke Hamilton with Costa. Council received an Australian Organics Recycling Association (AORA) award in December 2018 for its composting, introduction to FOGO and commitment to the local community.

- One year before FOGO commenced a five-year contract for shredding of GO kerbside and public drop-off started. The waste was stockpiled and shredded on a regular basis. When FOGO commenced the opportunity to shred FOGO collections ceased due to the need to be processed everyday as per the license. It is currently not cost effective for the contractor to attend the site every day to shred small quantities of FOGO (20 tonnes per day). Without a shredding machine onsite, FOGO is added to the MAF stack post decontamination and once fully composted and trammelled, the overs need to be shredded becoming feedstock for a new pile.
- Currently a MAF stack once fully processed is 40% unders and 60% overs. The unders are sold as compost for \$31 per cubic metre at a number of transfer stations in the shire. The overs are shredded with self-haul garden organics and added as feedstock to the next stack as required.

WHAT COULD IMPROVE

- If we were to have a small shredder onsite to shred FOGO at the front end daily, the amount of unders would substantially increase, leading to around 90% of back end product able to be sold as compost, increasing the profitability of the product, and reducing the double-processing of the overs. We know we need to get our decontamination process perfect before we can shred.
- It would also reduce the leachate leaving the compost pad by fundamentally changing the structure and homogenisation of all MAF stacks thereafter.
- Purchase of a small shredder for self-use, however, will not be an option until after the contract expires in four years. A 12-month contract would have been preferable.
- A wind-sifter on-site at the end of the process could increase the quality of the end product by reducing small pieces of plastic that end up in the overs, which can sometimes make a batch unsaleable.

Dam construction

Varying the license to include food organics meant that new infrastructure was required to manage leachate from the process. The dam required to hold this needed to be quite significant in size. Dam design and construction was changed mid-way through the construction process, adding time and cost to the process. This was due to a larger dam requiring to be built to cater for large volumes of leachate due to consecutive rain events.

Water management plan

The water management plan was required for the license variation. Considerable cost was involved in managing this including tankering leachate to a sewerage treatment plant after a significant rain event.

Resourcing

Resourcing was an issue at our organics processing site. There was imbalance between the perceived staffing requirements, budget and the actual time taken. Clarification was needed on site boundaries as the Waste and Recycling transfer station and organics processing were located on the same site.

WHS, procedures, risk minimisation

These documents were developed on the run which hasn't been successful. Having generic/skeleton documents which can be tailored to the circumstance/site would have made it easier and quicker to create these site and process specific documents. Unplanned events including fire recovery took resources away from writing these in the pre-planning phases.

Dealing with contamination onsite

Prior to FOGO, contamination of green bins wasn't really an issue. To reduce contamination at the Organics Processing Site, three staff are required to decontaminate; one in the wheeled loader, and two physically decontaminating with hand pickers. This is a high-risk activity and there is still education required to target reducing items such as hypodermic needles.

Preventing contamination at the source

The FOGO education campaign around the launch has been largely successful in teaching people about what shouldn't go in the FOGO bin, although this needs to continue as people become complacent, new people move into the area, and we also have a high number of visitors/tourists who do not have FOGO at home and would have never heard of FOGO. Although we are achieving low contamination rates at industry best practice, there are still improvements to be made.

As part of the new collections contract the contractors have the Clearaview system with cameras installed on new trucks. These take photos at the kerbside for obvious contamination or bins not presented, and a photo as the bin is emptied into the truck in order to identify contamination at the source. Using GPS coordinates as well as driver confirmation of street address, each contamination incident is logged, with photos for one of the Waste staff to identify the contamination and send out a contamination postcard to each address detailing what was found in the bin, and how it should be correctly disposed of.

WHAT WORKED

 Contamination sits at around 0.4% and we are continually thanking our community for their efforts. We use positive reinforcement and ongoing education to remind people about what goes in. We are also updating our resources based on the items most people ask about to make it even clearer what can and can't go into FOGO.



- We issued contamination postcards after FOGO started until we received feedback that the GPS coordinates matching the addresses were slightly out, and people were receiving postcards for contamination by their neighbours. We have stopped sending until we have a better way for collection drivers to manually enter the street number.
- Some NSW councils surveyed have a three-step contamination process whereby events at each address are logged, contact made with residents, and third incident within a certain period can result in removal of bin, or contamination fine or service. This could be a doubling in waste charge, for example, to cover the cost of decontaminating at the organics site. Bega Valley does not have a firm contamination policy, and should have had this in place prior to rollout.

KITCHEN CADDIES

As part of our grant funding, we provided free kitchen caddies to all households.

The tender included supply of 14,400 plastic kitchen caddies, 12,000 certified compostable bags to fit (meeting standard AS4736-2006), and distribution to 11,500 residences. An additional 1600 bags were purchased for sale at transfer stations, libraries and the council office.

WHAT WORKED

- The delivery contractors worked out of a large shed at the Central Waste Facility. Each morning they would load up utes and vans to deliver caddies, bags and two flyers. One contained information on the collection schedule for the next four weeks, and the other was key information on what FOGO is and what can go in.
- Having the contractor onsite during caddy and bag delivery meant that we could get answers to questions straight-away such as whether an address had been delivered to.
- This was a fantastic opportunity to get relevant information to householders and we included information brochures and tips on how to use FOGO inside the caddies, plus a free roll of FOGO bags.
- This was an important milestone in our marketing campaign and we engaged local media to help us get the word out and amplify what we were doing on our own social media accounts. It provided a great opportunity to talk about a number of FOGO-related messages such as download the APP to keep track of bin dates (ie bin collections are changing), choose the right bin (ie what can and can't go in FOGO).

- The caddy distribution tender document stated "During the distribution process residents may interact with distribution team and may request further information for Council follow up. The distribution team must record the request on an interaction sheet. The interaction sheets shall be supplied to Council on a daily basis. A Council FOGO Officer will follow up on customer enquiries." There were different interpretations about the delivery of caddies. Council wished this to be to the door, whilst the distributor preferred the letterbox. After two days of delivery to the doors, it became apparent that the delivery timeframes were not going to be met, so delivery location was changed to the letterbox. This caused some issues with caddies being lost or stolen. There were around 350 caddies redelivered by council staff, this time to the door, which took additional Council resources over the four-week period postrollout. It also meant that important interaction with residents did not generally occur.
- Clearer directions for what happens when the distributor cannot find a house number were needed. There are a number of properties with confusing or missing letterbox/house numbers and for this reason some properties were missed. It would have been beneficial to have set rules if the address was not found.
- Provision of delivery schedule in real-time. In the first few weeks, almost 20% of the calls received by Council's FOGO Green Team were in relation to lost or stolen caddies. Had we had access to delivery data, we could have provided more information to callers, on whether the truck had delivered to a particular street.





- Where caddies were missed or stolen, we should have offered for people to collect them from the library, tip or council office (in many cases they would have done this easily) instead of offering separate deliveries. Around 20 separate days were taken up post caddy rollout by Council staff from the waste team or the FOGO Green Team delivering lost, stolen or undelivered caddies. We stopped distributing missed caddies to the door of properties five weeks after the end of the caddy rollout, however, we should have stopped sooner.
- The design of the compostable bags that were supplied by the contractor were confusing to use. There were 33 calls (almost 12% of Green Team calls) in the first few weeks with people complaining of split bags. Through speaking with other councils, we knew this was going to be an issue, so included instructions in the detailed Frequently Asked Questions (FAQs) document. We also posted a short video on our Facebook page of one of the Green Team with instructions for opening the bags. Only one set roll of bags was found to be faulty, and was replaced.
- Due to tight deadlines the contractor rushed the caddy and bag delivery which resulted in lack of care at some delivery addresses. Some caddies were delivered with multiple leaflets, or none at all, some caddies squashed outdoor plants. Additional care was required to ensure delivery was accurate.
- Nobody who tendered had caddies with recycled content. We can see an opportunity for future FOGO rollouts for an Australian business to supply caddies to Councils made from recycled material.

WHEN DO YOU START TALKING TO OUR COMMUNITY ABOUT FOGO?

WHAT WORKED

- Councillor support. Council voted unanimously in support of commencing the FOGO service, and to change from a weekly to a fortnightly landfill bin service (as recommended by the Waste and Recycling team). Politically it was a big risk to introduce such a big change that had potential to divide the community, however, the risk paid off and all of council, including Councillors continue to be fully onboard and excited about the innovation shown. The Waste management coordinator has worked hard to include and involve Councillors at every opportunity so they have a good understanding of the what, why, who and how of FOGO (as well as other waste initiatives).
- Other changes to get ready for FOGO. In January 2018 we were aiming for a mid-year rollout of FOGO. In readiness for the new service Council awarded its waste contract tender which triggered several changes including new green bins for some residents. Rather than have a firm date to start, we told the community that they could start FOGOing as soon as their caddy arrived. This was planned to coincide with regular collections.



- Due to unforeseen delays such as licencing and approvals and the Tathra, Reedy Swamp and Vimy Ridge fires in March 2018, for a long time Council was unable to provide a specific date of when FOGO started. This created confusion and challenges when trying to educate the community about the change – we needed to explain what FOGO was and why it was essential, but without clear timelines we had to be mindful of people being eager to start straight away.
- When new green bins were distributed, a media release about this using FOGO as the lead angle from Council Comms created significant confusion in the community because the community thought that the new bins were the trigger for the new service starting. This was an important lesson in making sure all external and internal communications were aligned. We were working with an external media consultant to manage the project, as well as with our internal communications department – and realised we needed to bring these two closer together to deliver clear, concise messages pre-FOGO.
- Our community was ready to go FOGO and ABC television program War on Waste was creating momentum behind the scenes for #nofoodtolandfill initiatives. Part of our strategy was to seek ideas from the community to make sure we covered all bases with the new service, but while we didn't have a clear start date and went to the community with information about FOGO, our organics team were getting food in the green bins well before the service started.

WHAT CAN AND CAN'T GO IN THE BIN

There are a different range of items that can be accepted into the FOGO collection depending on the type of composting system that is used. A commercial composting system is different to a home composting system in that it heats up to higher rate and held there for longer. We advise to check with supplier of equipment as to what can and can't go in, and provide a detailed list to customer service and your FOGO Green Team in the form of FAQs.

• Frequently asked items were: oyster shells, kitty litter crystals and clay litter, compostable cups and plates (might need brand), ash, compostable nappies, baby wipes, tea bags (staple, bag), sanitary pads, paper towel, cooking oil.

• Australian standard AS 4736: certified compostable compared with European Standards EN 13432 and International Standard ASTM D6400.

There were some items that were identified as meeting European or International commercial composting standards but not Australian. We are looking to test these items through our system and have partnered through the CSIRO and NSW EPA to make that happen. For example, two brands of baby wipes claimed their products were compostable, compostable coffee cups and cutlery. There are planned trials to test whether they successfully break down in our C-Wise MAF stack. We are also trialling enee compostable nappies and sanitary products in an Australian first trial, as well as food dehydrators.



Management Plan 2017-2022, must **not** be put into your FOGO bin. These weeds are to not be knowingly transported and it is an offence to do so under Sec 23 of the Biosecurity Act 2018.

FOGO HOTLINE

From discussions with other councils we knew call volumes would be high leading up to FOGO starting and for the first few weeks afterwards.

Council Customer Service (Council's main number): We arranged for an additional two staff members to support the customer service team with FOGO enquiries. All customer service staff had simple tick sheets with information on the type of FOGO calls received.

Council's main Customer Service line received an increase in calls of 90 per week over the first few weeks. Difficult or enquiries of certain types were transferred to the FOGO Green Team.

FOGO Green Team hotline 1300 number: Four members of the FOGO/Waste team were allocated. This phone number was provided to multi-unit dwellings and to residents as part of the information brochure provided with the kitchen caddies. Call statistics were recorded in more detail, with each call allocated to one of the FAQs (85 different categories) or other, and further detail added. This helped us respond in a more targeted way on Facebook, and we provided Customer Service with detailed FAQs, escalation points plus regular updates on how things were progressing.

PERCENTAGE OF FOGO CALLS FIRST TWO WEEKS

QUERIES	PERCENTAGE
Caddy missing/not received	18.4 %
Can't open the bin liners	> 11.6%
Where does this go?	10.5%
Bin options available	5.6%
I want FOGO but don't have a green bin >	4.5%
What can go in my FOGO bin	> 3.4%
Are my collection days changing?	2.6 %
We are being forced into a service we don't want	2.2 %
Will FOGO be available for commercial properties?	2.2 %
My red bin will overflow every week (families, young children)	> 1.9%
How do I remember to put out my bins?	> 1.5%
Can I get more bags if I run out?	> 1.5%8

Other FOGO questions answered via the FOGO hotline and customer service included:

- > I need a bigger/smaller/change to bin service
- > My bin liners tear and break, can't open them
- > What is the Bega Valley Waste APP
- > I can't afford this service/don't want it
- > Odour in green bin
- > Need help putting address into Waste APP

We also received calls congratulating us on FOGO!

WHAT WORKED

 From the start of caddy distribution to the second week after FOGO starting the call volumes were high, then dropped dramatically. Our own FOGO Green Team took up to 160 calls a week at peak time, mostly relating to not receiving caddies or how to open the bags. We tackled these using frequent FB posts and videos and also had one staff member delivering extra caddies every day or two.

- It would have been beneficial to have at least two extra customer service FTE for that four week period
 to free up the Green Team to be out with community more, plus to have a delivery person every other
 day for extra caddies, or to make extra staff available at the libraries, transfer stations and the council
 office.
- Some phone calls were tense, particularly relating to FOGO service the caller didn't want, the landfill bin changing to a fortnightly service or flies and maggots around the bins in mid-summer. We used the FAQs as a guide for standard responses. Some callers were rude to staff. To improve we could have provided better advice to staff members about what is acceptable in certain circumstances. Where a caller is swearing at a staff member, it is acceptable to say that Council doesn't tolerate that language and hang up.

COMPOST END MARKET

The initial organics project had three end users: residents and businesses and then council itself more recently through application to amenities and parks. The Waste APP helps provide information about compost pricing and availability is updated regularly. A fact sheet contains information on typical compost analysis, application uses and rates. We also have new signage at the entrance to the Merimbula organics facility letting people know when compost is available.

We have encountered several challenges:

Getting compost to end users. A truck or trailer is needed to pick up compost or delivery to be available. Large quantities of compost are delivered by contractors at a set rate. Another opportunity to increase sales has been the purchase of a bagging machine and building of a shed for covered compost bagging at the Merimbula Organics Processing site for contractors to bag compost for sale.

Making sales. We were always concerned about the extra amount of compost available when FOGO started and how we might end up with stockpiles that we were unable to move. One way to address this oversupply was offering free compost to Tathra residents who'd experienced the bushfires to shift bulk amounts of this stockpile. Unfortunately this coincided with processing problems regarding compost quality and we ended up:

- a) Running out of compost.
- b) Having disgruntled customers because the compost had created problems in their gardens due to pH levels.

Quality of end product. This situation provided valuable lessons and identified gaps in our systems.

- a) We need to improve the information we provided to customers on how to use the compost.
- b) We've had to change our processing methods to improve the quality, which means that we've had to process for a longer period.
- c) The education campaign we'd embarked upon to 'sell' this high quality product has taken a hit so we will need to be sure that when we release compost to the community again that it is of the standard we have promised.

WHAT WORKED

- A competition was run on a local radio station to win up to 10 cubic metres of compost delivered.
- Keeping the APP updated on compost availability.
- Making the compost available at several of our facilities so that people living in outerlying parts of the shire don't have to travel so far to collect.
- Improved signage at our main compost purchase sites to highlight pH.
- Fact sheets for staff to hand to people when they purchase the compost to provide tips on how to use it in their gardens.
- Relationships with nursery managers who can on-sell and recommend the compost, as they have more face-to-fact contact with keen gardeners than our staff do. They also play a key role in making sure the compost is applied correctly.
- Ongoing print/social media campaigns to highlight the benefits of compost.
- Celebrating people's efforts to choose the right bin by sharing stories in the media and on social media when Council uses compost on public spaces.

WHAT COULD IMPROVE

- We could have allowed longer for planning and infrastructure, including construction tendering before rolling out FOGO. We thought 18 months would be enough.
- Council worked with the existing site that we used for mulching garden organics, extending it to incorporate food waste once FOGO launched. We are looking at funding opportunities to relocate our processing to a larger site. A better option would have been to plan a site around the expected volumes of FOGO received and ensuring the site has capacity in the long term.
- The proposed process of windrowing garden organics waste was not appropriate for the site. A better understanding of organics processing methods would have reduced unnecessary cost of purchasing equipment that was unsuitable.
- A change in contractor mid-project meant that design of the dam changed, adding time and cost. The
 dam design should have been reviewed earlier and we should have used the same contractor to design
 the dam structure and liner system. This person needs to be very familiar with waste processing.
- Some opportunities for selling compost and mulch products have been postponed due to competing priorities taking time away from planned activities.

REVENUE CHARGES

The change to FOGO came midway through the second quarter of FY 2018/2019. As a result, there were some challenges reviewing the revenue charges. A change to revenue and rates notices needed to be made to include a description of what service each individual property is charged for, where previously there had been a waste service charge.

Costs were kept the same in the first year, apart from the CPI increase of 3.5%.

WHAT COULD IMPROVE

• It would have been easier if the change to FOGO had coincided with the start of a new financial year.

