

About this paper

This paper was produced to give potential partners of the Local Compost™ Project more information about the project. Most of this content has been taken from other related documents, some in Q&A format.

Project Name

Local Compost™- Demonstrating a Circular Economy of Organics Waste

Project contacts

Circular Food Pty Ltd – www.circularfood.com
Steve Morriss – steve@circularfood.com or 0414445642

Project description

The 'Local Compost™ Project' will be delivered in partnership with Municipal Councils and Industry and aims to demonstrate a strong market for organic soil products made from household food waste and other organic wastes. The market we will focus on is urban households, urban gardeners and foodies, and the growing urban 'looped food systems' now being heavily promoted by Victorian local councils.



In Melbourne alone, over 350,000 tonnes of organics waste from kerbside and another 250,000 tonnes of commercial food waste is generated each year. Approximately 95% of this currently goes to landfill.

There are few quality products available and poor uptake of products made from these resources. Increasing consumer awareness of the availability and benefits of using these products can drive the necessary change required to reduce contamination and support a circular economy.

Circular Food, with previous funding from SV, has developed a high quality, commercially available soil amendment from food and green waste.



The first product, and the focus of this project, is called 'Local Compost & Soil Improver™'. The keys to success will be producing a consistently high quality, contamination free product. We will achieve this by only using AS4454 certified partners, and having the product routinely tested to AS4454 standards. To reduce risk of contamination we will strictly specify a fine particle size and double screening plus strict procedures around contamination.

The second essential element for success is building a trusted brand and although outside the scope of this application, Circular Food will work tirelessly with partners like Planet Ark to ensure we achieve this objective.

Working with Councils and Industry, the demonstration / promotion of this product will help educate local residents about food waste and how they can be part of the solution by using products of organics waste.

This demonstration project will provide information on product performance, practicality, constructability, cost-effectiveness, environmental impacts, occupational health and safety and technical specifications.

Project benefits include reduction of food waste to landfill, increasing consumer education and awareness to reduce contamination and increase recovered volumes, all to facilitate a circular economy of organics waste in an urban environment.

Broader community benefits include leading the way for other recyclers of organic products, demonstrating that producing quality products that pull material through a circular economy is the only sustainable option for their businesses and society as a whole.

If successful, this project will be duplicated across Victoria and later Australia.

Support for the project

So far we have letters of support from everyone we have asked. Local and State Government, Industry and Not for Profits are all very supportive of a concept whose time has come. Letters of support are attached to this document from:-

- MWRRG
- City of Hume
- City of Whittlesea
- City of Monash
- Yarra Valley Water
- Planet Ark
- Nestle
- TATA Global Beverages
- Closed Loop

This list will grow quickly. After all, the key to a circular economy model is collaboration. We are actively seeking more partners so please contact us to join or refer us to an organisation you think might be interested in joining.

Contact Steve Morriss – steve@circularfood.com or 0414 445 642.

What are we you going to do?

Circular Food® and partner councils and industry will demonstrate that a circular economy model is the most effective and sustainable method of diverting food waste and green waste from landfill.

We will oversee the toll manufacture, packaging and delivery of a high quality product of organics recycling and use this product to demonstrate the positive impact of a 'pull' (demand) of product through a circular economy rather than pushing materials (supply) away from landfill.

Local Compost™ is a timely project that aims to close the loop on organics waste in an urban context. The main problem with the organics recycling industry is the absence of trusted, effective, products of green and food waste to pull the volumes through the circular economy.

The current organics recycling model is based on pushing organics waste out of sight and driven by gates fees. This creates low quality, semi composted, potentially contaminated materials being pushed onto the market at low prices to avoid stockpiles.

Previous and current projects designed to pull products of organics recycling into use have focused on urban amenities and farming markets. This project will focus on building a new market for these products, the urban householder, and to do so we will collaborate with supportive local councils.

The current market for composted organics waste into urban amenities in Melbourne is based on composted greenwaste only. The Local Compost™ project includes food waste derived from:-

- On site food waste dehydrators
- Digestate from Anaerobic Digestion plants
- In Vessel composting systems (FOGO – Food Organics Green Organics)

Most City Councils in Melbourne have Food System or Food Strategy plans to encourage the development and support of urban food systems. All councils have a need to better manage organics waste. The 'Local Compost™' project will collaborate with local councils and householders to build a whole new market for bagged and bulk products of organics waste.

This project will also investigate the problem of limited information and activity promoting the effectiveness and qualities of products with recycled organic content. This issue often results in unfounded yet negative perceptions about these products.

The main objective of this project is to demonstrate that there is a market for high quality compost and soil improvement products derived from food waste and green waste in the urban household and urban amenities markets in Melbourne. New markets will be created by working with local government to promote and sell 25 litre bags of 'Local Compost and Soil Improver™' to households in urban Melbourne.

This project supports the [Victorian Market Development Strategy for Recovered Resources](#) (the Strategy) and the [Recycling Industry Strategic Plan](#) in the following ways:-

1. Improve the performance of products incorporating recovered resources
2. Increase the use of products incorporating recovered resources

And the project supports the Recycling Industry Strategic Plan as follows:-

1. Increase the quality of recycled organics materials
2. Develop markets for recycled materials

The Local Compost™ project supports circular economy principles as it seeks to demonstrate an industrial system that is restorative or regenerative by intention and design.

This project shifts thinking away from end of life concepts and aims for the elimination of waste through the superior design of products, systems, and within this, business models.

We aim to guide manufacturing and consumption of recycled organics products to a system that is made circular in nature; improving material and system efficiency and reliance on virgin materials.

Our main theme is that of restoration, where nutrients derived from organics waste are used in households and urban amenities to restore depleted soils on urban house blocks, in green spaces and looped food systems.

What is the intended outcome of the project?

The intended outcome of the Local Compost™ project is to demonstrate the value and market for high quality soil products derived from urban organics waste.

In the 24 month period of this project we will collaborate with local government, industry, and householders to sell approx. 1000 tonnes of high quality Local Compost & Soil Improver™

product in the urban household and amenity market in Melbourne. Approx. half this volume will be sold in 25 litre bags and half in bulk form.

What previously undertaken research or knowledge is already available in this area, and how are you leveraging from it?

Circular Food has spent the last 2 years researching and developing a range of high quality soil products derived from urban organics waste. This R&D work has been in part assisted by an Investment Support Grant from SV which helped fund extensive third party plant growth trials using the said products. Other assistance has been provided by AusIndustry's R&D Tax Incentive Scheme.

Furthermore, we have worked closely with the City of Hume, City of Monash, City of Whittlesea, City of Moreland and City of Darebin to gain a strong understanding of the preferred method of engaging with Local Government in Victoria to have local government become part of the solution by specifying, procuring and using products of organics waste in urban amenity projects thereby closing the loop.

Circular Food is a past member of the NGIV (Nurseries & Garden Industries Victoria) and a current member of AORA (Australian Organics Recycling Association). We have developed a network of suppliers, growers and retailers to facilitate the production, distribution and sale of products derived from organic waste in Victoria.

Some of the products we have developed to date are current certified inputs to organic farming via NASAA (reg'n # 3916M)

The 'Local Compost™' project is also leveraging previous research including:-

- Guide to biological recovery of organics (SV)
- Social research perceptions of recycled organics products (SV)

What activities will you undertake to distribute the final outcomes to broader stakeholders (e.g. universities, government and industry)?

The activities we will undertake to distribute the final project outcomes to broader stakeholders include:-

- Present the project outcomes as a case study to conferences and industry events
- Allow media outlets to report on the project findings
- Collaborate and share outcomes with the CRC for Food waste in SA
- Ditto with Dr Viv Waller and the Urban Composting Research Group at Swinburne
- Remain open to collaborate with universities, government and industry just like we always have.
- During the past 12 months Circular Food has engaged with RMIT University by supporting a master's student through two separate research projects and is committed to working with University researchers and promoting the project concepts within such institutions.

NB. New networks and opportunities will arise during the course of the project and this project is open to collaborators at all times. The findings of this project will be openly shared in the knowledge that the main purpose of the project is to build markets for recycled organics materials in Victoria.

Who will deliver the project?

Circular Food will deliver this demonstration project. Some inputs to the product will be produced by Circular Food at our Somerton factory. Supply of compost base materials, along with blending, bagging and shipping will be contracted to companies with existing infrastructure in the organics recycling industry.

Please see Appendix A for list of companies we will work with to deliver this project. NB. All of them operate in Victoria.

Please see Appendix B for support letters from Local Government, Industry, and Not for Profits who have committed to support this project.

Why is this project needed?

The Local Compost™ project is needed because we do not currently have a circular economy of organics waste in Victoria. Some composted greenwaste is sold into urban amenities markets and farming, but no significant products or markets exist for recycled food waste.

This project includes green waste and food waste as inputs to a high quality product called 'Local Compost & Soil Improver™'. We (society) need to start closing the loop on organics waste (including food waste) where the waste is produced. To do that, a high quality product of food and greenwaste needs to be consumed by all of us, everyone who creates organics waste.

The Local Compost™ project will raise the awareness of all citizens to the fact that we all need to be part of the solution, and the nutrients in food waste and green waste need to be reused to maintain healthy soils in the city that produced the waste. This is a new market for products of food and green waste but a very necessary market if we are to build a true circular economy of organics waste.

The project aligns with the objectives of:-

- Statewide Waste and Resource Recovery Infrastructure Plan (SWIRRP).
- Victorian Organics Recovery Strategy, which plans for all viable recovered materials to be extracted from waste streams before reaching landfill.

The Local Compost™ project is designed to increase end market uptake, and demand for, products made from recycled organics, including food waste. This is the core business of the lead applicant.

How will this project support increased use/procurement of the specified targeted material(s)?

This project will support increased use / procurement of organics waste derived soil products by:-

- Making a high quality product of organics waste more well-known, trusted, and more easily available to local government, industry, and the general public.
- Changing the dynamics of the organics waste industry. Rather than pushing waste, we will demonstrate the need, and ability, to pull high quality products through the new circular economy.
- Awareness / consciousness raising via social media campaign, media interest including TV and radio, speaking at conferences etc. (NB. Funding for marketing activities to be provided by lead applicant, not this grant).

- Education. Schools can visit Circular Food and learn about the circular economy of organics waste.
- Demonstrating that a quality product from recycled organics (including food waste) is possible
- Once we have traction with 2 local cities / councils, the FOMO effect (Fear Of Missing Out) will kick in and drive participation from the majority of Melbourne councils
- Circular Food will participate in any and all local government conferences and events, either individual, groups, MWRRG, or rural. (At Circular Food cost).
- A plan exists to duplicate this project around Australia in the mid to long term (3-5 years). The project utilises existing infrastructure and reduces carbon footprint of organics recycling activities by using the products in the town, city or region the inputs were generated in.

What impact will this project have on wider recovered resource markets for the specified targeted material(s)?

The project will impact wider resource recovery markets by:-

- Providing an important tool (high quality products) to support the promotion and gradual uptake of FOGO (Food & Green Organics) collection systems in Melbourne and Victoria.
- Demonstrating leadership in Melbourne and Victoria
- Meeting community expectations for resource recovery activities
- Educating homeowners and industry that organics waste is a resource, not a problem.
- Driving behaviour change to reduce contamination in organics waste streams
- Increase flows of cleaner organics waste into the circular economy
- Build a positive reputation for all products of organics recycling

What environmental impacts will be generated from the intended project outcomes? (e.g. greenhouse gas reduction)

The environmental impacts of this project include:-

- Reduction of GHG emissions by the reduction of methane generated from landfilling organics waste
- Sequestering carbon from waste organics back into the soil
- Retention of soil and plant nutrients in the circular economy such as nitrogen, potassium, phosphorus, sulphur, calcium, magnesium, iron, manganese, boron and other trace elements.
- Closing the loop on nutrients of organic waste in the geography in which they arise. In this case, urban Melbourne, means a reduction in transport derived GHG emissions and other negative impacts of transporting goods.
- Increasing the ability of soils to retain moisture and other nutrients while resisting pests. This reduces water consumption and increases yield and nutritional value of urban food crops.

How will the project be conducted?

The Local Compost™ Project is a demonstration project to build a circular economy of organics waste / nutrients, in an urban context.

The main methodology used will be a combination of case study and field experiment. It's a practical approach where the sale, use and feedback from customers of high quality products of organics recycling are the main measure of the projects success.

The project will be conducted as follows:-

- Choose product production partners from existing waste management and organics recycling industry
- Agree product specs and test to Australian Standards for compost & soil conditioners
- Outsource the decontamination, maturing, blending, testing, packing and delivery of high quality products derived from existing organics recycling processes.
- Build collaborative partnerships with customers including Victorian Local Councils, State Government, related industry, industry groups and more.
- Promote the project and products heavily
- Sell the products. Subsidise products to ratepayers.
- Collect and document feedback from end users, councils and industry.
- Report findings
- Demonstrate the value of high quality products of organics recycling to create 'pull' (demand) as a critical development stage of a circular economy of organics materials.

How do you intend to monitor the results throughout the project?

Results will be monitored as follows:-

- Volume of product sold / distributed
- Market research to ascertain
 - Satisfaction of users regarding product quality
 - Support for the concept, circular economy of organics nutrients
 - Awareness of broader Melbourne community of the project
 - Feedback from MWRRG, SV, and Local Governments
 - Feedback from schools and other educational groups
 - Feedback from community gardening groups and food businesses

The results of this project will demonstrate (or not) that a market exists for high quality products of recycled organics in an urban marketplace and that 'pull' (creating demand) versus 'push' (supply of inputs) is the key to a circular economy of organics materials.

How will you evaluate the project (how will outputs be measured?)

- Sales revenue from Local Compost & Soil Improver™
- Customer satisfaction related to product performance (at end)
- Demand, forward orders
- Collaborative project partners (how many, what value they have gained, demand from other partners).

How will this project consider barriers to commercialisation and uptake (e.g. supporting infrastructure; transport/logistics; standards and specifications)?

The main barriers to commercialisation have been identified in the Recycling Industry Strategic Plan, the Victorian Market Development Strategy for Recovered Resources and Perceptions of recycled organics products social research, and include:-

1. Real quality issues related to products of recycled organics
2. Perceived quality issues related to lack of control of feedstocks

Other barriers include:-

3. The cost of supporting infrastructure
4. The financial and environmental cost of transporting waste and products of organics waste long distances
5. Attaining consistent specifications with inconsistent inputs
6. And to a lesser extent, meeting high quality standards

This project demonstrates a new circular economy model which is the very core of the Circular Food business model. What is needed to generate positive change in the organics recycling industry is a new element of the circular economy of organics waste, this new element, championed by Circular Food is the 'pull effect'.

From SV's 'Strategy' doc:-

What is the 'push' and 'pull' effect?

Resource recovery has largely been driven by a 'push' to divert waste from landfill, which has been strongly supported by the community's desire to recycle. This 'push' or supply of materials has not always been matched by consumer and industry 'pull' or demand for products made from recovered resources. This imbalance in supply and demand of recovered resources can result in stockpiles of these materials, and can reduce the viability of some resource recovery industries.

In order to create 'pull', we will collaborate with the existing organics waste collecting and recycling industries, and take the outputs from the existing processing sites and mature, decontaminate, blend, pack and ship to market. We become the custodians of product quality, consistency and provenance.

With that in mind, we plan to overcome issues 1 - 6 as follows:-

1. We start by selecting the highest quality output products available from existing organics waste processors in Victoria.
 - a. We manage this material through maturity, decontamination, blending, pack and shipping processes eliminating the need for new infrastructure.
 - b. We work with partners whose processes are certified to AS4454.
 - c. Our products are certified to AS4454

2. We will gradually overcome perceived quality issues by building sales of high quality product and leveraging off self and industry generated publicity to win the hearts and minds of consumers both urban and rural.
3. The issue related to the cost of supporting infrastructure has been addressed above. There is no significant infrastructure cost.
4. The cost of transporting products of organics waste long distances will be minimized by keeping it local. Local Compost™ will be made from organics waste generated in Melbourne and sold back to consumers in Melbourne.
5. The issues of inconsistent inputs will be overcome by implementing standards and processes to minimize variability of finished products
6. Local Compost & Soil Improver™, the product, will meet or exceed AS4454 for compost and soil conditioners.

About our commitment to Corporate Social Responsibility (CSR), including creating social benefit for local communities and disadvantaged community members.

Circular Food and the Local Compost™ Project are driven by the belief that it is possible to make money while doing good. Circular Food was conceived and is run to contribute to a more sustainable, healthy, and fun future for all.

We help industry partners meet their CSR goals and aspirations, a great example of this is our relationships with Nestle, Planet Ark, and Tata Global Beverages. See support letters attached.

Regarding our support for local communities, we are currently contributing to the City of Moreland's 'Local Food Strategy' and the City of Darebin's 'Urban Food Production Strategy' and it is the intension of this program to collaborate at an even higher level with those groups and others just like them throughout the urban gardening and foodie community in Melbourne.

Conclusion

Thanks for your interest. Please join what will surely be one of the most exciting, collaborative, and inspirational circular economy initiatives to come out of Victoria.

Contact:-

Circular Food Pty Ltd – www.circularfood.com

Steve Morriss – steve@circularfood.com

0414 445 642