FACT SHEET

On-site Food Waste Processing Technologies

Residential Flat Building Waste Processing Infrastructure

OVERVIEW

Food waste recovery in residential flat buildings faces many challenges, including space constraints, governance and amenity issues. On-site processing technologies can be a potential solution to overcome these challenges.

Five on-site processing technologies were assessed alongside kerbside food organics and garden organics (FOGO) services to understand and compare their economics and space requirements to collect food waste in existing residential flat buildings.

5 processing technologies **assessed**

- Eco Guardians Soilfood System
- Closed Loop Commercial Composter
- Worms Downunder Grande Range
- Pulpmaster 6000 Food Waste Management System
- InSinkErator Food Waste Disposer

Assessment Findings

Different technologies represent different approaches to managing food waste and benefits in a residential context. For example, some technologies designs are intended for other markets, such as community gardens or commercial food service businesses. Still, all operate at a scale that is potentially appropriate for residential flat buildings.

Whole-of-Life Cost Comparison

The first-year installation and establishment costs and ongoing costs over 15 years were calculated for lease and purchase options to enable a whole-of-life cost comparison for the different technologies in a building with 50 households. See figure 1.

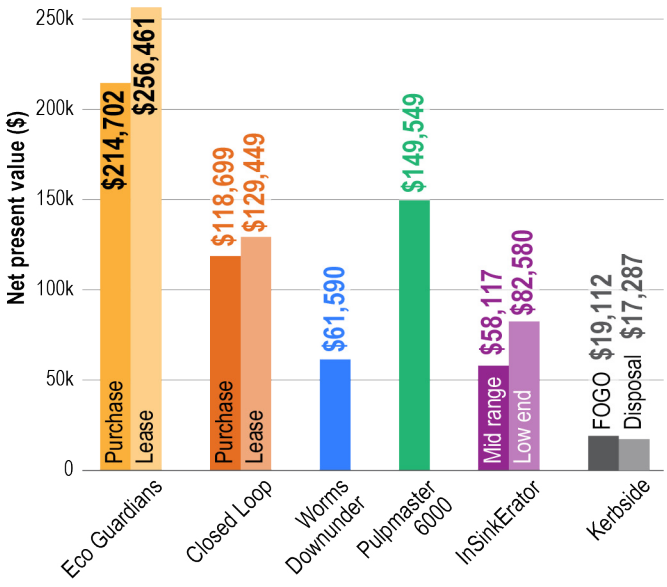

Figure 1: Whole of life cost over 15 years

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3 key issues for implementation

Increased Costs

Landfill disposal is slightly cheaper than an on-site food waste collection service which is unlikely to be a financially attractive option for 50-household buildings. The dominant cost difference is the capital cost or leasing costs for the on-site equipment. All but worm farming require the removal of organic material offsite, adding to systems costs.

Training and Education

On-site processing requires training and controls to ensure that unsuitable material does not enter the systems. However, individual households should not directly access the system, and short-term (daily) consolidation of raw food waste in bins will still be required.

Storage

In some situations, storage space may be a relevant factor for system selection. See figure 2. A space requirement comparison showed a significant difference between some technologies and food waste collection bins, especially for substantial residential flat buildings.

Based on default waste generation rates and weekly FOGO collection.
Does not include space requirements for the movement of waste from households to the central storage area/technology.

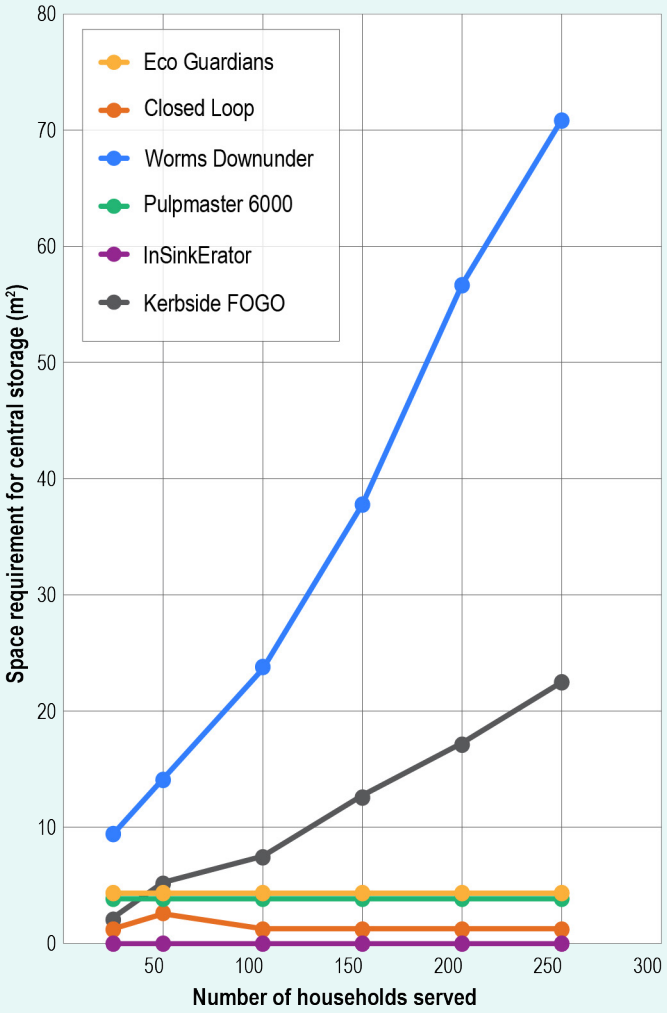

Figure 2: Space requirement for centralised food storage

SETTING UP A SUCCESSFUL SYSTEM

Councils should review the cost inputs to reflect their specific circumstances and then consider whether to pursue kerbside FOGO or any on-site organic processing options for residential flat buildings. Councils will also need to work through implementation at an individual building level to set up a system for success. Choosing a processing technology is only one part of implementing a waste processing system for residential flat buildings. Governance and ongoing engagement with households have a critical influence on the success or failure of organics recovery.

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