

## HRM Organic Waste Facility March 26, 2025

- by Denise Contrasty



*Photo: HRM*

On a sunny spring morning, 19 people including three young boys aged 12 years and up drove to the new HRM Organic Waste Facility in the Goodwood industrial park located just past the Halifax Exhibition Centre. There we were led to a viewing room on the second floor of the building where we were greeted by the General Manager, Sean. Sean is an employee of AIM Recycling that has a private contract with HRM to process all organic material into compost. The new plant opened in May 2025 to serve all of HRM and replaced two existing plants, one nearby and the other in Burnside.

The facility was built with proven technology by a Dutch firm that has constructed 200 such plants world-wide. This plant is entirely self-sufficient with no sewage or water hook-up from HRM. There is an average of 60 trucks arriving daily between the hours of 7am to 6pm, and the plant is operated by 13 employees. If there is an issue in the plant overnight, the staff receive a phone alert to attend to it. The compost produced is of minimal value, and the operation is funded by HRM property taxes.

Compost produces enough corrosive gas that the plant must be evaluated after 25 years to see if its operation can be extended another 5 years. If yes, it again will be evaluated at 30 years to see if it can be used another 5 years when it will be shut down at 35 years maximum.

The facility accepts residential organics and also commercial loads such as vegetables and fruits or freezer failure food from grocery stores. Attendees asked about the quality of waste collected and Sean stated that malls and cinemas have the poorest quality as people are unsure of what is organic versus blue recyclables versus garbage. There was also discussion about disposable diapers and animal waste from dogs and cats that would need their own separate processes to compost. At this time both types go to the landfill. Medical waste is handled by Stericycle in Burnside that either burns this type of waste or heats it up to destroy pathogens before it goes to the landfill. Sean said people should use kraft paper bags to collect waste at home as opposed to the supposedly compostable plastic bags that take a long time to decompose.

The plant uses an aerobic process involving naturally occurring bacteria found in the waste, and is completely done indoors with a negative pressure air flow so that no stinky odours will affect its residential neighbours. It takes 60 tons of organic waste to produce 20 tons of compost, that is sold to bulk soil blenders, who in turn sell their product to landscapers.

Organic waste arrives by trucks that must enter an air lock fitted with an outer and inner door that alternate in opening and closing. The loads are first put on the receiving floor where it stays for 72 hours. During this time the heat of the waste rises due to the action of bacteria in the waste, and the temperature is kept to 55°C to avoid fires. After 72 hours a front-end loader transfers waste to be a shredder that is so strong that even rebar (steel rods used in construction) would be shredded into small fragments. This is to increase the surface area for microbes.

Once shredded, the waste is placed in 1 of 9 “vessels” or bins that are 30 m long by 8m wide and loaded up to 4.5m deep for 3 weeks. Each bin has the capacity of holding 66 cubic metres. There is an air flow system that forms the floor of the bin to push air through the waste to assist in decomposing.



*Photo: HRM*

The air is then sucked up and put through an acid wash created by mixing water with sulfuric acid to remove ammonia that gives off the stinky smell. This ammonia in turn reacts with the wash to create liquid fertilizer that is then sold commercially to large outfits. It would be too strong to use on a home garden.

Once the 3 weeks are up, the waste is put through a screen that uses air to separate particles. The undersized waste bounces across the screen while the oversized bits of plastic and glass is removed by air “knives”. The plastic and glass waste cannot be recycled via the blue bin program as it is considered too dirty for reuse and must go to

the landfill. The screened waste is then mixed with older waste and put back into another vessel for another 3 weeks. If necessary, water is added to the mix to keep down the dust or is removed if the mix is soupy. At the same time wood waste can be added to get the right consistency of compost in the winter when there is little garden waste such as leaves and branches.

Once the waste has sat the second 3 weeks, it is again screened and the mix adjusted as necessary. This time it is loaded into 1 of 4 vessels used for maturation of the compost for another 6 weeks. Then it is usually cut with 30% sand and 70% compost before being sold to bulk soil blenders.

There was time for a question and answer period. One person asked about weeds, in particular Japanese Knotweed, and Sean replied there were conflicting reports whether the composting process used by the plant neutralizes the spread of knotweed. On another note, Sean said that HRM is currently reviewing its recycling process for major revisions.

The tour inside the facility was held in a large room with three large observation windows where front end loaders could be seen transferring waste about to vessels or the shredder. There was also a white board that showed the date when each vessel should be emptied or another step started or its end product sold. There was a bank of four computers used to monitor the process, one of which displayed footage from the various cam recorders around the plant.

Sean then offered to show us around the outside of the building. We watched trucks backing up into the airlocks before Sean took outside a handful of compost for us to touch and smell.





*Photo: Bernie McKenna*

In spite of Bernie trying to wrap up the tour, Sean was very enthusiastic and took us around to the other side of the building where there was an engineered pond that holds 7 million litres maximum of water. This water is used to adjust the humidity of the compost and also is the water source for the sprinklers inside the building. The pond relies on precipitation to replenish itself and there is no city water connection. There is an overflow valve if too much storm water is collected. Last September the plant had a month's water supply left due to the ongoing summer drought, and water would have been trucked in if necessary.

While outside, Sean showed us a pile of shredded biomass made from Hurricane Fiona debris and situated within the building, through which the exhaust gas are

filtered being released through the exhaust stack. This further ensures that the local community suffers no negative effects from the facility's location.

This fantastic tour of the new HRM Organic Waste Facility was an enlightening experience for us all! To see the whole process from start to finish and have the 13 stages explained so well brought everything into perspective. We sincerely thanked Sean for such a detailed and informative tour. Unfortunately, no interior photos can be displayed on the HFN website due to company policy. Further down the road it is hoped we can have Sean give a presentation at one of our monthly meetings.