



## MATERIAL RECOVERY FACILITY



### Unloading and Storage

Farz features a massive area for unloading, sorting and storing municipal solid waste before it gets processed through a series of material recovery stages.

### Shredders

Two shredders with a combined capacity of 1,200 tons per day work around the clock to shred the waste and feed it in to the trommels.

### Trommels

Two large trommel screens divide the input into different fractions based on size. Fractions that are over 300mm in size are taken out for further manual sorting before being fed again into the line. Valuable fractions between 80-300mm in size are passed on to the next stage of magnetic separation on four different-sized belts. Fractions smaller than 80mm are taken out of the process.

### Magnets

Four big suspension magnets separate the waste into ferrous and non-ferrous. Ferrous waste is passed on to the next stage. Non-ferrous waste is passed through another stage of separation using eddy current to ensure there are no ferrous components in the non-ferrous line.

### Compactors

Small fractions from the trommels, and non-ferrous waste separated by the magnets are together fed into a quality control stage to ensure this line of waste is comprised of less reactive inert metals and organic waste only. These are then fed to a baler and then compressed into skip type portable compactors for disposal into landfills.

### Delivery

The produced bales are the final product of Farz's MRF. They are loaded onto trucks and shipped out of the facility. Huge scales weigh the trucks when they enter and when they exit in order to get the weight of the outcome.

### Baler

Waste is passed in batches using the pit conveyor into the final stage where the waste is compressed through channel balers to produce consistent, high density bales.

### Quality Control

The optical and ballistic separators result in four different lines of different types of waste that are passed through a quality control stage before they are dropped and pushed onto a pit conveyor that feeds them separately into the baler.

### Ballistic Separators

Ballistic separators separate the waste into 2D fractions (such as film, cardboard, foil and textiles) and 3D fractions (such as bottles, plastic containers, and cans).

### Optical Separators

The waste conveyed by vibro feeders is passed on through optical separators that use near-infrared spectroscopy technology to take out all plastic materials. Another stage of optical separators segregates HDPE and PET from mixed 3D plastics.

### Vibro Feeders

Ferrous waste pulled by the magnets is fed to vibratory feeders to achieve uniformity and distribution.