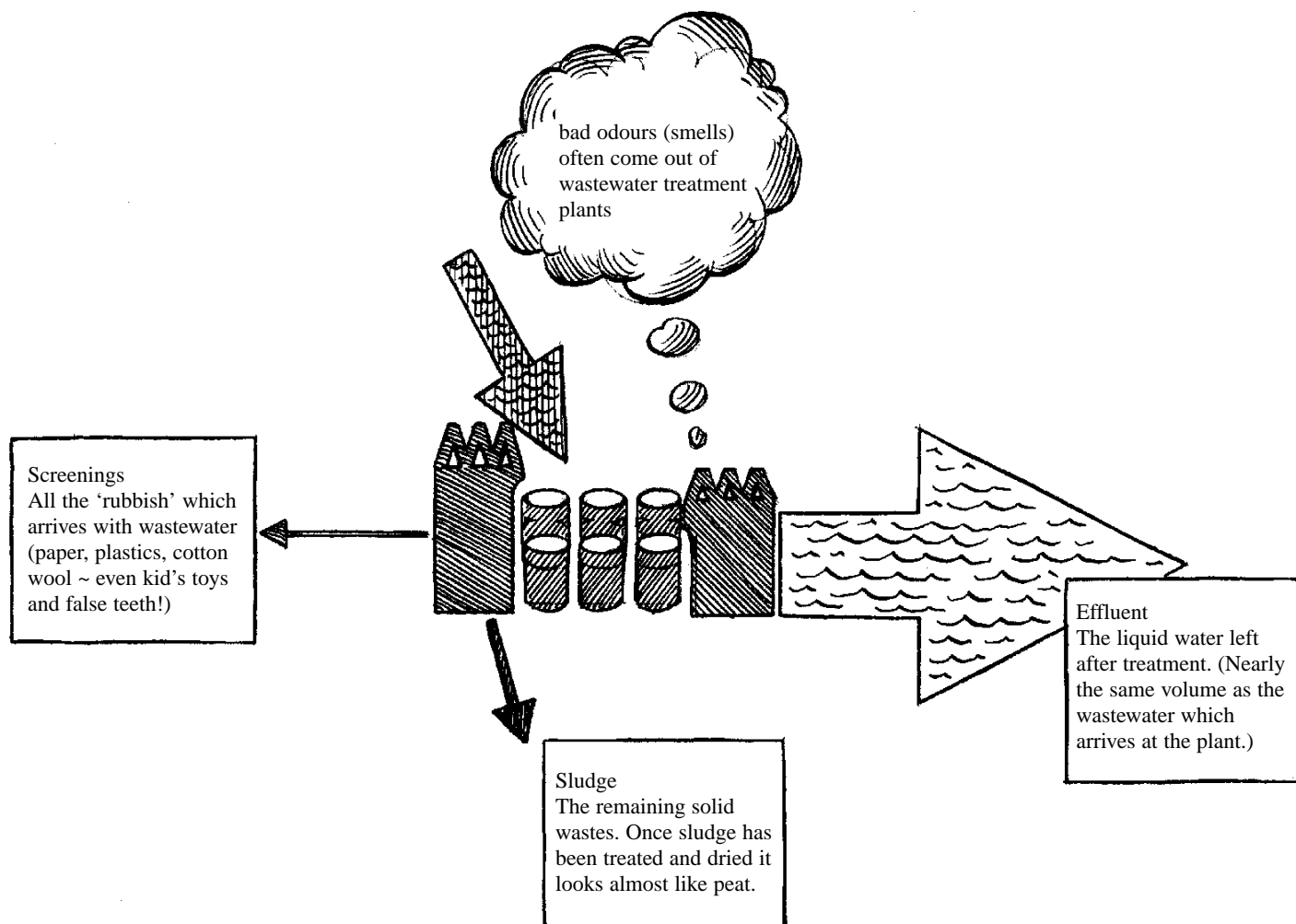


WASTEWATER ACTIVITY EIGHT

What goes in and what comes out of a wastewater treatment plant?

- Wastewater arriving at the plant is nearly all water (99.9%).
- The remainder, (0.1%) is, oil, grease, and solids such as grit, paper, plastic, and human faeces (poo).
- Wastewater also contains chemicals, from factories and homes. Just think about all the soap, detergent, laundry powder, hair shampoo, and cleaning chemicals we pour down the drains each day.
- Wastewater is very contaminated water and treatment plants make this safer for returning to the environment.



What happens to the odour, screenings, sludge and effluent from the Mangere treatment plant? Study this diagram then use the words **effluent**, **sludge**, **screenings** and **odour** to fill in gaps in the story.

Wastewater is smelly! Wherever possible, the is trapped and piped away for treatment. A special telephone number has been set up for odour complaints from people living near the plant.

..... are ground up, have the liquid pressed out, and are taken away to a landfill for burial.

..... is treated to kill disease producing bacteria then dried so it looks like peat or soil and used for landfill.

After 3 weeks treatment the is released into the Manukau Harbour. Wastewater effluent is much cleaner than raw sewage, but still contains micro organisms which are a health risk, organic matter which uses up natural oxygen in the sea water, and nutrients which can cause a build up of seaweed and slime.

The treatment plant has just started a \$360 million upgrade to reduce the damage caused by effluent on the harbour.