

Survey Report 2

GP Groot

(Construction and demolition waste recycler)

GP Groot

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Visiting location: Alkmaar, The Netherlands



Company Profile

- **The company was founded in 1917 and has a history of 107 years. It began with businesses such as coal transportation and milk can collection. Since then, 65 gas stations have been opened.**
- **In 1973, landfill disposal was started and the land was expanded. In the early 1970s, when there were no regulations on landfill disposal, waste was increasing.**

Company Profile

- **In 1988, landfill regulations began and costs were incurred for landfill disposal in the Netherlands. Initially, the charge was collected by volume, but now it is collected by weight (tons). Since then, landfill disposal has gradually expanded, although regulations have been tightened.**
- **In recent years, the company has been working towards achieving carbon neutrality.**

GP Groot, our 107-year-old history



GP Groot starts transporting coal

1917



First sand transport for road construction

1935



Opening landfill Alkmaar

1973



Opening first NXT petrol station

2017



First hydrogen gas station

2024

203



Purchase first T-Ford

1921



Opening first petrol station

1966



Opening first waste sorting plant

2010



Waste Disposal & Recycling Business

- **It collects about 1.9 million tons of waste per year for treatment and recycling (100~500 tons of debris per year). It collects waste generated mainly in the north of the Netherlands.**
- **Sorting has a capacity of 37 tons per hour and can process 140,000 tons per year.**
- **Of the waste collected, 75% is sorted and recycled and 25% is incinerated for energy recovery.**
- **Wood and biomass waste is either incinerated or produced as solid fuel (RDF). Limestone (used in ordinary European dwellings) from house renovation is separated and collected.**

Waste Disposal & Recycling Business

- **There are two systems for waste disposal: collection and sorting. In some cases, the waste is sorted by container at the stage it is brought in (metals, plastics, etc.), but in urban areas, waste is mixed and transported in containers as there is no space for multiple containers at the construction site for sorting.**
- **Minerals and concrete shells mixed with wood waste are used as raw materials for concrete production.**
- **Waste containing materials that cannot be incinerated in the Netherlands may be transported to Germany for incineration.**
- **The Netherlands has a small land area and limited capacity for landfill disposal (the Dutch share of landfill disposal is 2%).**

Waste Disposal & Recycling Business

- **Efforts continue to dig up and clean waste from old landfill sites for utilizing it as recycled material. Recent wastes are increasingly made of plastics and metals, which can be hazardous in landfill. Old landfill waste is less harmful, so it is dug up, cleaned and recycled as a resource. The plan is to continue digging up waste for the next 10 years, but it is not known whether this will continue further after 10 years.**

Waste Disposal & Recycling Business

- **In the future, plastic and wood recycling facilities will be introduced.**
- **For the disposal of demolition waste and waste generated by companies, there is no obligation to sign of commissioning agreements or issue manifests, as in Japan.**
- **Demolition waste is to report the annual volume collected to the competent ministry.**

Transition to a Circular Economy

- **The energy transition is also underway. The company has six electric vehicles, hydrogen-powered vehicles, hydrogen buses (public driving) and hydrogen stations (hydrogen is supplied by hydrogen companies).**
- **Mono-materials are difficult because products are composed of a composite of various materials and contain adhesives and other inclusions. Many manufacturers do not consider recycling, so it is necessary to appeal for recycling awareness on the part of manufacturers. In collaboration with the Technical University of the Netherlands, research is being conducted into methods of recycling and the environmentally conscious design of construction materials to increase the possibility of recycling.**

Photos: Waste stock yard (indoor)



Photos: Transport vehicle



Photos: Waste collecting



Photos: Sorting line



Challenges in the Waste Disposal and Recycling Business

- **Gas cylinders may be replaced in the renovation of houses, and they may be mixed in with demolition waste.**
- **Lithium-ion batteries explode once every two days, and fire protection equipment has been strengthened.**

