

Access

Take a Sotetsu Bus from Sotetsu Kibogaoka Station. Get off the bus at “Zenbu Dai Ni” and walk for approx. 10 min.
Or, walk for approx. 20 min. from Minami-makigahara Station on Sotetsu Izumino Line.

Shinmeidai Disposal Site

Landfill Operations for the Safe and Comfortable Lives of Citizens



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Yokohama City waste and recycling webpage

<https://www.city.yokohama.lg.jp/kurashi/sumai-kurashi/gomi-recycle/>

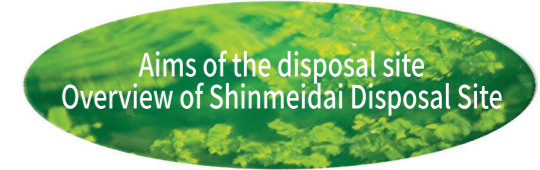


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City of Yokohama

Landfill Operations for the Safe and Comfortable Lives of Citizens



Aims of the disposal site

In Yokohama, citizens, businesses and administrative bodies are united in their efforts to reduce the amount of waste generated and to recycle wherever possible, and are striving to cut the amount of waste that is sent to landfill. However, the fact is that despite these efforts, we still need to have effective ways to dispose of leftover waste. At final disposal sites, in order to allow citizens to lead safe and comfortable lives, we engage in safe and secure landfill operations that give consideration to reducing the burden on the environment and promoting harmony with the environment.

Overview of the Shinmeidai Disposal Site

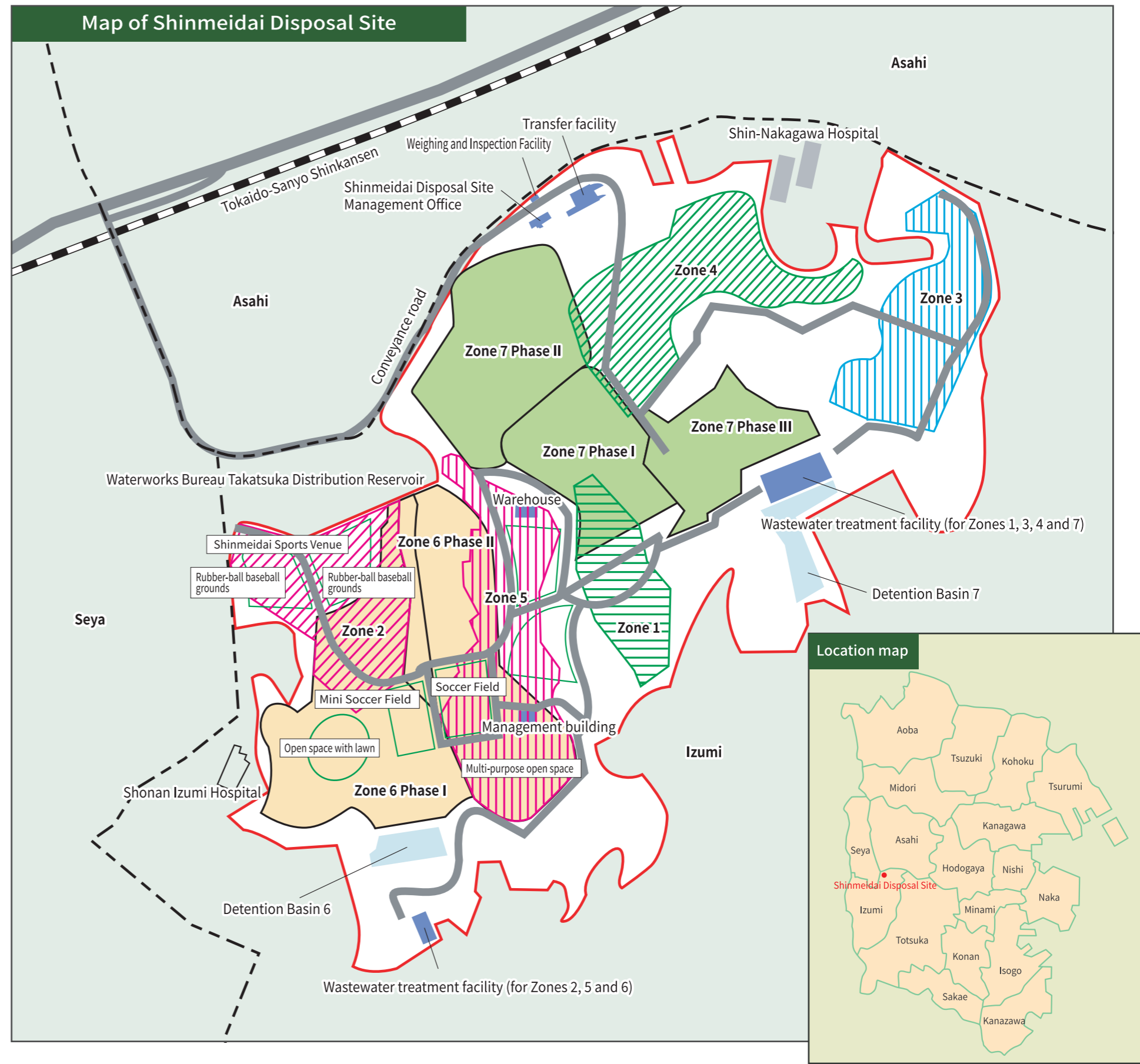
Filling of the Shinmeidai Disposal Site was completed in March 2011. Following its filling, this site became home to a waste transfer facility, a disposal yard for large-size waste, and other disposal facilities. In addition, sports facilities and other facilities were also built, and the grounds opened on a temporary basis to local residents and other citizens. Until it fulfills the legally stipulated standards to permit discontinuation of its management as a final waste disposal site, wastewater disposal operations and other environmental measures must remain underway to ensure continued safe and suitable management of the site.

- Address: Part of Ikenotani and Shinbashi, Izumi Ward, City of Yokohama
- Total area of disposal site:
 - Approx. 53 ha
 - City land: Approx. 47.0 ha
 - Leased land: Approx. 5.5 ha
 - Other: Approx. 0.5 ha
- Landfill area: 430,000m²
- Commencement of common use: From October 1973
- Planned landfill volume: Approx. 6,809,700m³
- Wastewater treatment capacity: 3,700 m³/day

● Landfill plan

	Legend	Landfill area (m ²)	Landfill capacity (m ³)	Landfill duration
Zone 1		28,000	328,000	10/1973-2/1976
Zone 2		34,000	873,600	3/1976-6/1980
Zone 3		40,000	567,500	4/1978-6/1979 4/1989-8/1989
Zone 4		67,000	1,085,400	7/1979-3/1983 12/1990-1/1992
Zone 5		61,000	811,300	4/1983-8/1987
Zone 6 Phase I		50,000	738,300	9/1987-11/1990
Zone 6 Phase II		57,000	905,600	4/1991-3/1996
Zone 7 Phase I		34,000	330,000	4/1996-3/2003
Zone 7 Phase II		35,000	810,000	4/2003-3/2008
Zone 7 Phase III		24,000	360,000	4/2008-3/2011
Total		※ 430,000	6,809,700	

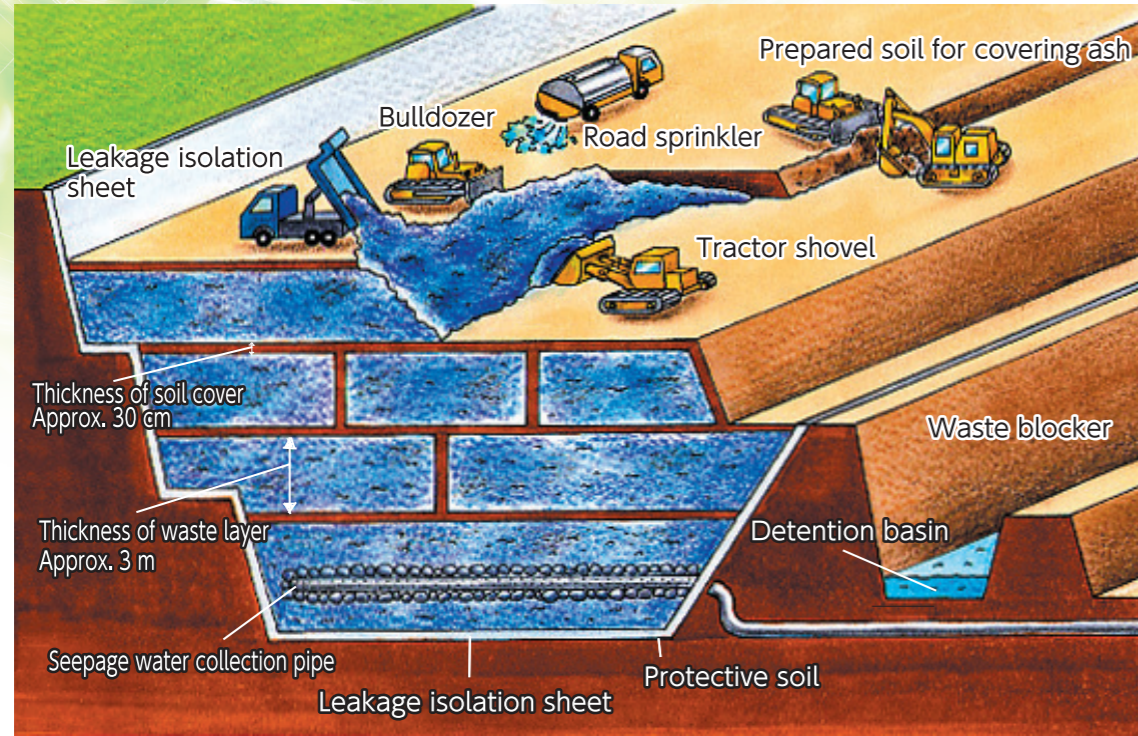
※: Some overlapping areas are present.



Giving consideration to the surrounding environment by using the following methods for landfill disposal



Method of landfill disposal



Environmental conservation measures

Landfill using the cell system

Incinerated ash which is conveyed from the incineration plant is sufficiently humidified, and the collected ash is then sent to the disposal site after having been solidified in cement. In addition, incinerated ash etc. that is sent to the disposal site is covered completely on the surface and slopes on the day using good quality soil to prevent it from dispersing into the air or emitting odors.



Dumping of incineration ash

Soundproofing measures

In order to control the amount of noise emitted from the disposal site, we have introduced low noise type heavy machinery (bulldozers, tractor shovels etc.) for use in landfill operations.

Dust-proofing measures

In order to prevent dust on conveyance roads and within the disposal site, we hose down routes using road sprinklers and plant greenery at the final landfill location.



Covering the ash with soil following landfill

Treatment of seepage water

In order to ensure that water that seeps through waste layers does not run outside the site or pollute groundwater, high performance leakage isolation sheet are laid on the base surfaces and slopes of landfill areas. In addition, collection pipes installed in the base of the landfill site collect seepage, which is sent to the water treatment facility for purification before its release into the river.



Wastewater treatment facility (contact aeration tank)

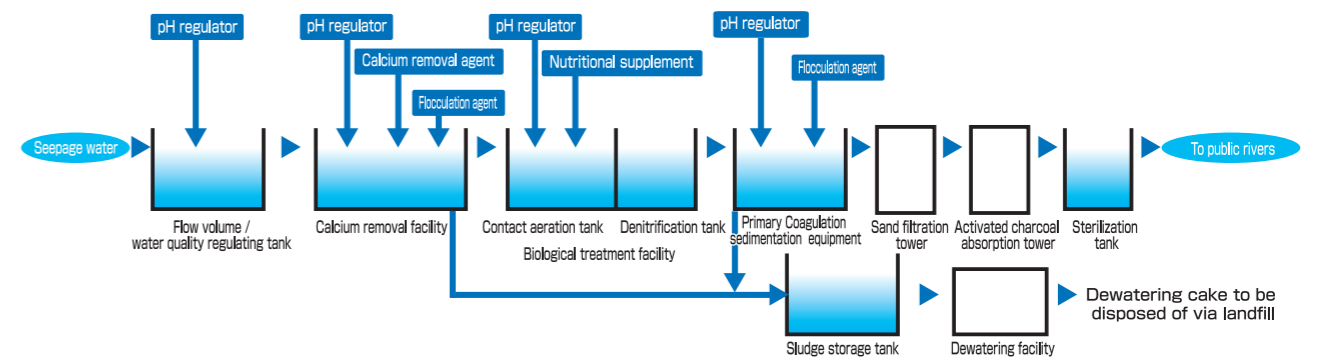
Wastewater treatment facility

Water treatment capacity Max. 3,000 m³/day

Treatment flow Calcium removal → Catalytic oxidation → Nitrogen removal → Coagulation sedimentation → Sand filtration → Activated charcoal absorption → Sterilization

Heavy metals and calcium are removed from wastewater using chemical treatment, and organic compounds and nitrogen content are then removed through biological treatment using catalytic oxidation and denitrification. Following this, residual suspended substances and organic compounds are treated using Coagulation sedimentation, sand filtration and activated charcoal absorption. Following sterilization, the water is then discharged into rivers. In addition, a separate wastewater treatment facility with a maximum daily treatment capacity of 700m³ is available when water purification demand necessitates its use, and water treated here is released into the public sewerage system.

Shinmeidai Disposal Site wastewater treatment facility flow



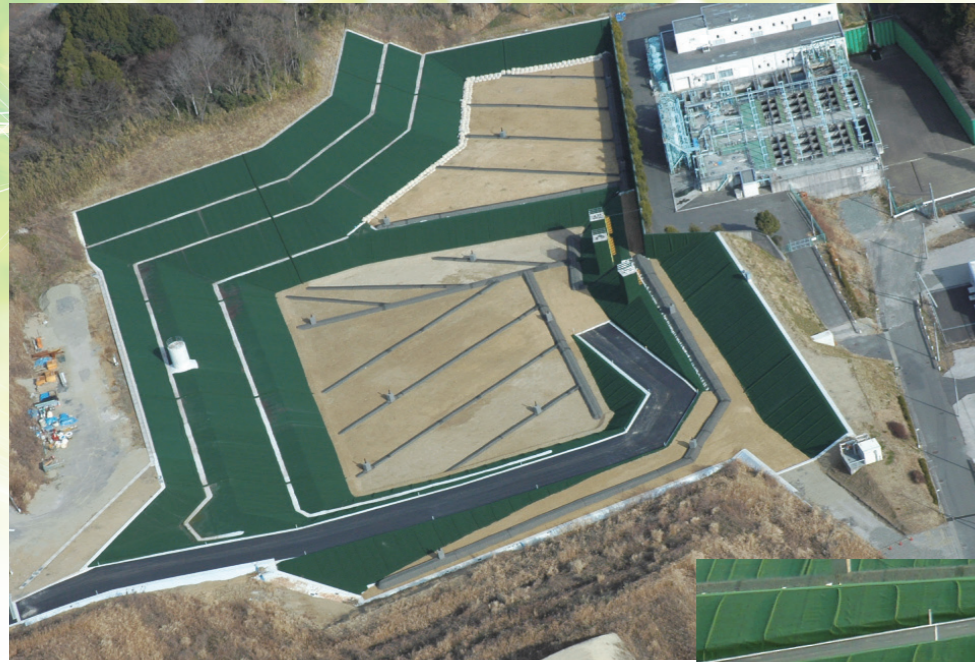
Rainwater measures

In addition to installing retarding basins as a measure to prevent flooding during heavy rain, we make efforts to conserve natural forests and plant greenery.

Implementation of environmental surveys

As part of subsequent monitoring for environmental impact assessments, we conduct ongoing surveys including not only pollution items such as general water quality, noise and vibrations, but also surveys on dioxins in the air, soil, wastewater and groundwater, as well as on matter which is dispersed during landfill operations. When conducting sampling for dioxin surveys for air and soil, we not only have members of local communities present but also publish the results of these surveys on the Yokohama Resources & Waste Recycling Bureau website. Environmental surveys are carried out every two years.

Overview of Zone 7 Phase 3 landfill area



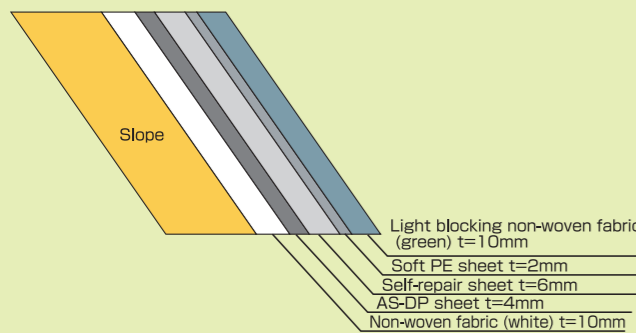
View of Zone 7 Phase 3 landfill area



Base section
(seepage water collection pipes, exhaust pipes for emitted gases)

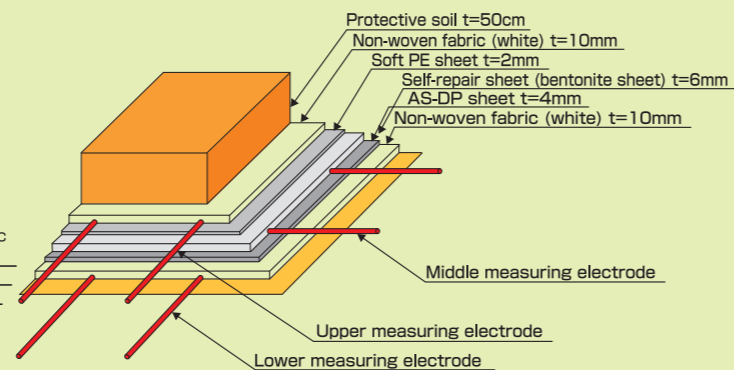
Leakage isolation structural plan (slope section)

Sheets which prevent water from leaking from within the landfill area (seepage water) (5 layer structure)

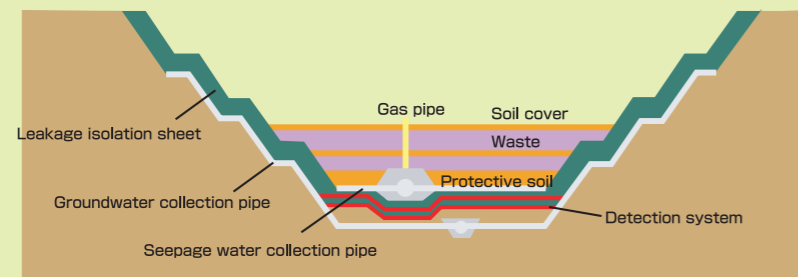


Leakage isolation structural plan (bottom slab section)

A system that detects leaking water through variations in current which flows between the top and bottom of the sheet using electrical wires laid between the leakage isolation sheets at the base section of the disposal site



Leakage isolation structural plan



Site usage

Once landfill operations have come to an end, we develop areas with stable ground into sports facilities etc. and make them available to members of the local community.

Facilities we have opened: Rubber-ball baseball grounds (2), Soccer Field (1), Mini Soccer Field (1) multi-purpose open space, open space with lawn

We are also making efforts to plant greenery at the disposal site, such as through the "Local Greenery Project," a project in which we have enlisted the cooperation of the local community in helping plant trees such as oak, beech and Machilus thunbergii, all of which are native to the Yokohama region, as well as "Wildflower," a project for planting wildflowers.



Rubber-ball baseball grounds



Soccer Field



Multi-purpose open space



Planting of trees through the "Local Greenery Project"



Open space with lawn