

Shinmeidai Disposal Site

Landfill Operations for the Safe and Comfortable Lives of Citizens



Access

Take a Sotetsu Bus from Sotetsu Kibōgaoka 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.

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Shinmeidai Disposal Site Management Office
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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.

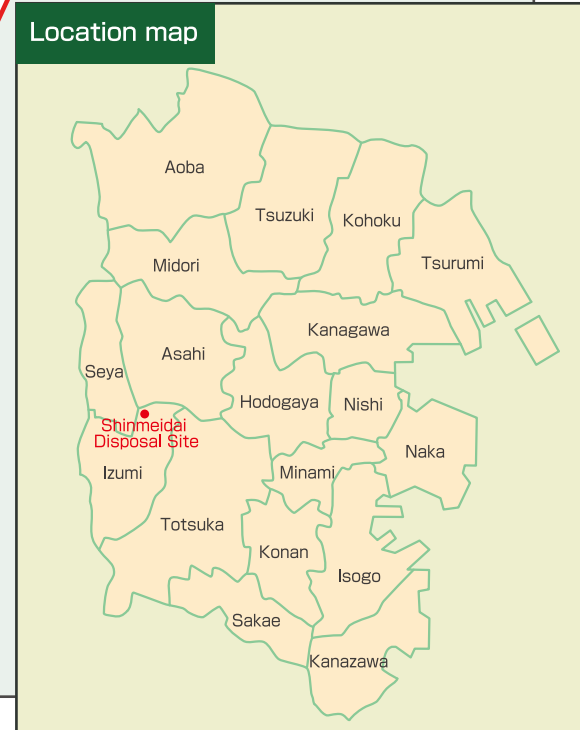
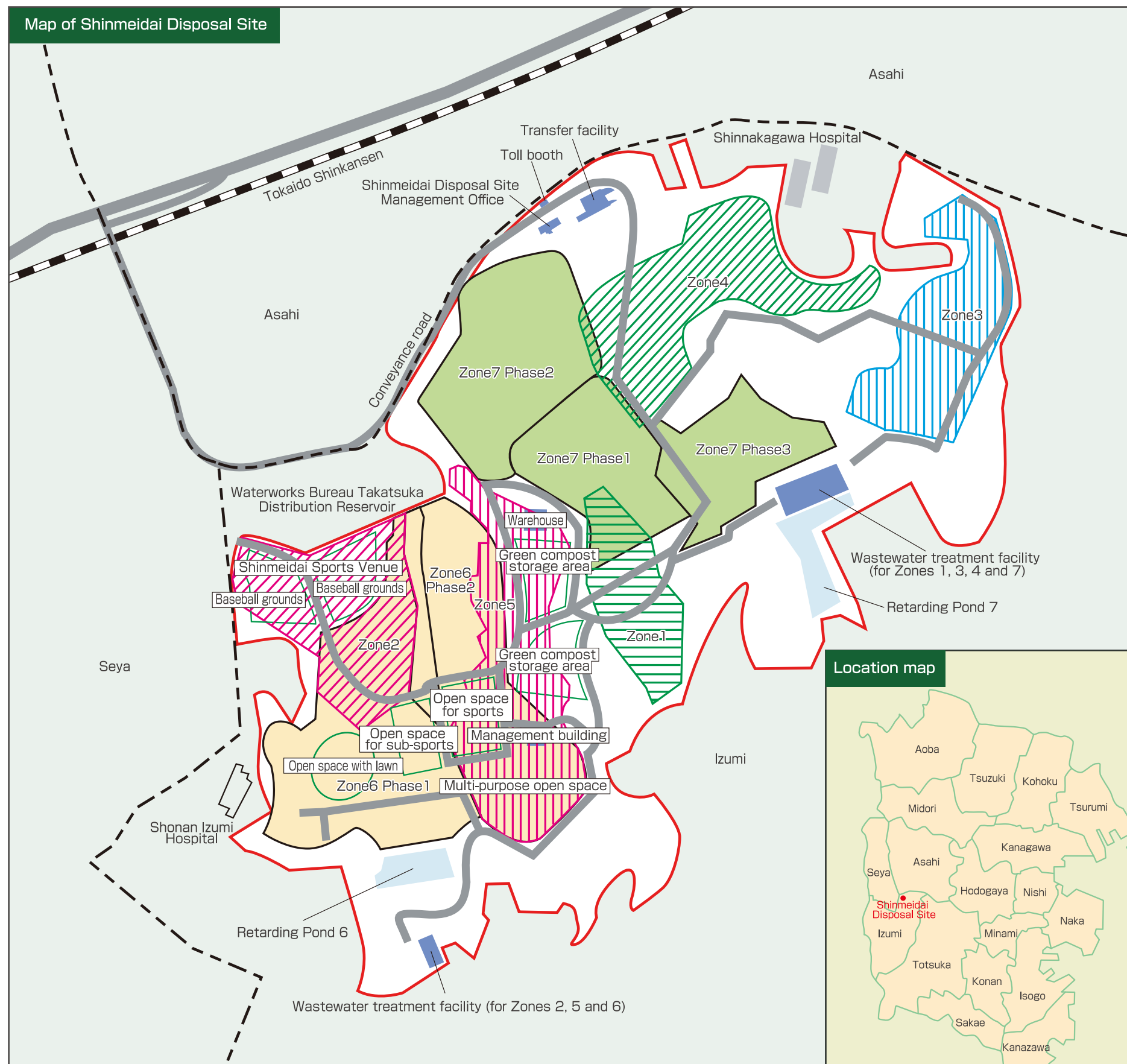
Overview of Shinmeidai Disposal Site

- Address Part of Ikenotani and Shinbashicho, Izumi Ward, City of Yokohama
- Total area of disposal site Approx.53ha
 - City land Approx.47.0ha
 - Leased land Approx.5.5ha
 - Other Approx.0.5ha
- Landfill area 430,000㎡
- Commencement of common use From October 1973
- Planned landfill volume Approx.6,809,700㎡
- Wastewater treatment capacity 2,200㎡/day

Landfill plan

	Legend	Landfill area (㎡)	Landfill capacity (㎡)	Landfill duration
Zone 1		28,000	328,000	1973.10~1976.2
Zone 2		34,000	873,600	1976.3~1980.6
Zone 3		40,000	567,500	1978.4~1979.6 1989.4~1989.8
Zone 4		67,000	1,085,400	1979.7~1983.3 1990.12~1992.1
Zone 5		61,000	811,300	1983.4~1987.8
Zone 6 Phase I		50,000	738,300	1987.9~1990.11
Zone 6 Phase II		57,000	905,600	1991.4~1996.3
Zone 7 Phase I		34,000	330,000	1996.4~2003.3
Zone 7 Phase II		35,000	810,000	2003.4~2008.3
Zone 7 Phase III		24,000	360,000	2008.4~2010.3
Total		※430,000	6,809,700	

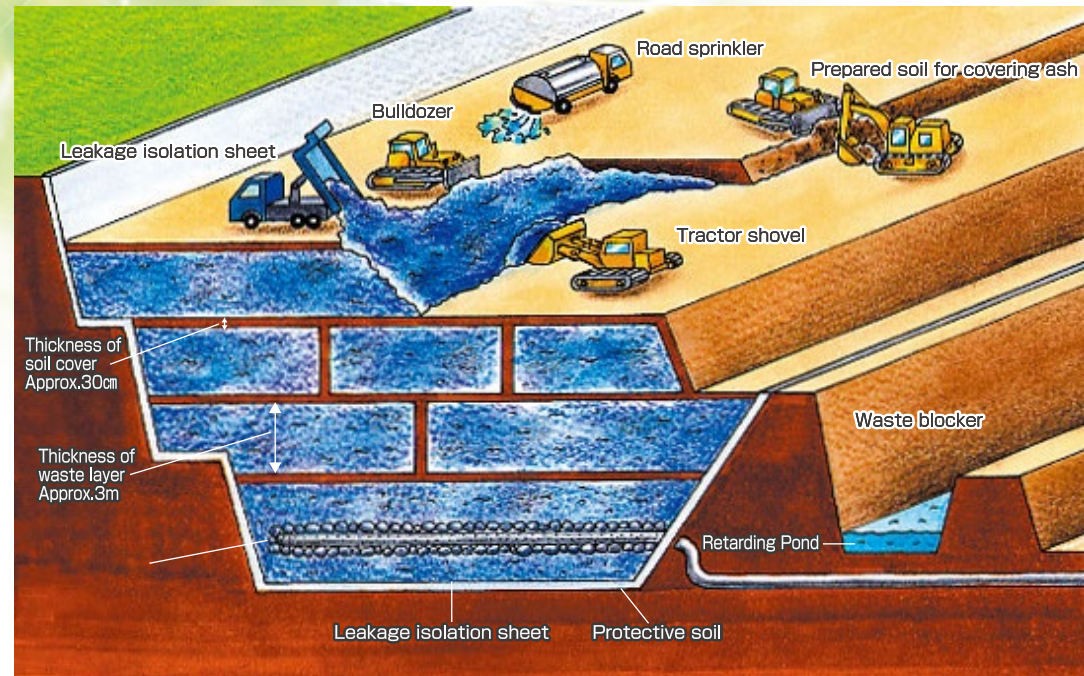
※: Some overlapping areas are present.



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 moisturized, 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.



Truck unloading 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, once seepage water that has been collected in water collection pipes located on the base surfaces of the landfill areas has been purified in a wastewater treatment facility, water gathered from Zones 1, 3, 4 and 7 is discharged into rivers, and water gathered from Zones 2, 5 and 6 is discharged into the public sewerage system.



Wastewater treatment facility (contact aeration tank)

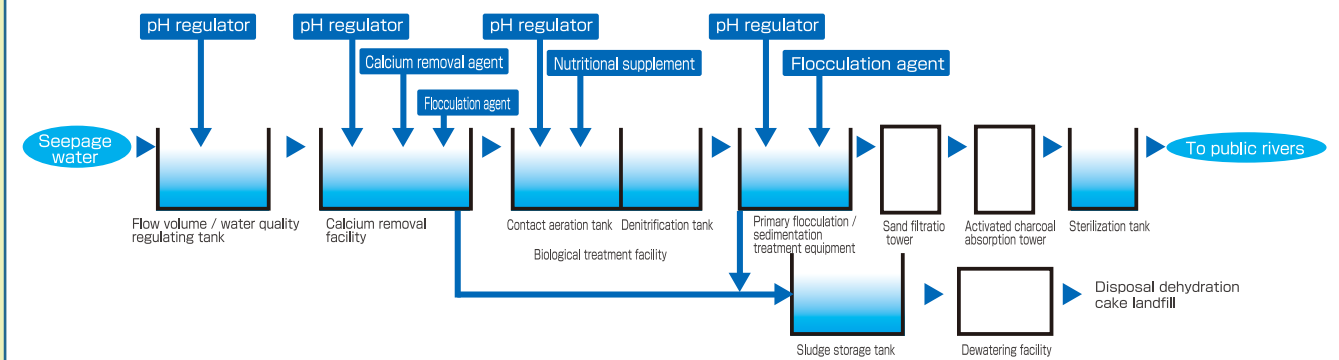
Wastewater treatment facility (system for Zones 1, 3, 4 and 7)

Maximum water treatment capacity: 1,500m³/day

Treatment flow Calcium removal → Catalytic oxidation → Nitrogen removal → Flocculation / sedimentation treatment → 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 flocculation / sedimentation treatment, sand filtration and activated charcoal absorption. Following sterilization, the water is then discharged into rivers. In addition, for Zones 2, 5 and 6, water is treated in a facility mainly for removing calcium (water treatment capacity: maximum 700 m³/day) and is discharged into the public sewerage system.

Shinmeidai Disposal Site wastewater treatment facility flow



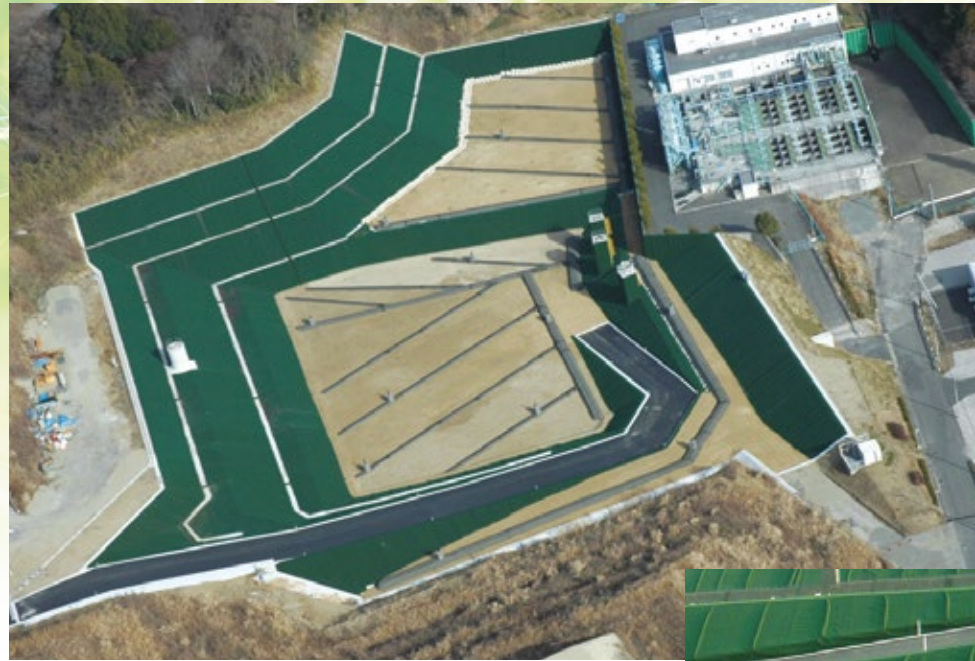
Rainwater measures

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 four years.

Overview of Zone 7 Phase 3 landfill area



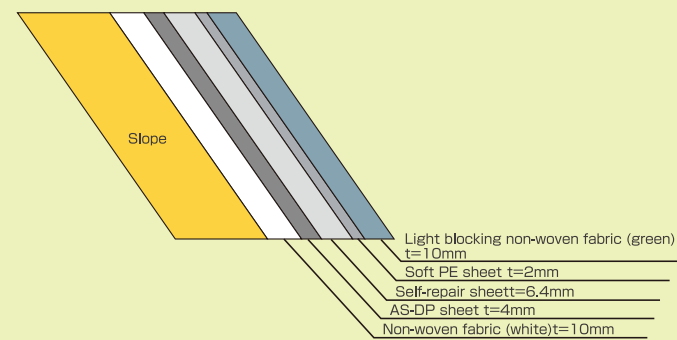
View of Zone 7 Phase 3 landfill area



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

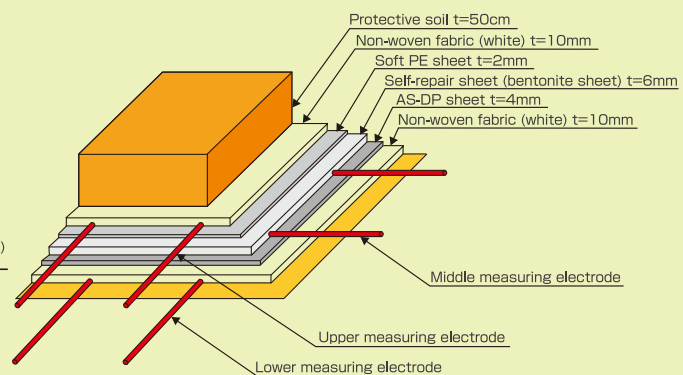
Leakage isolation structural plan (slope section)

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

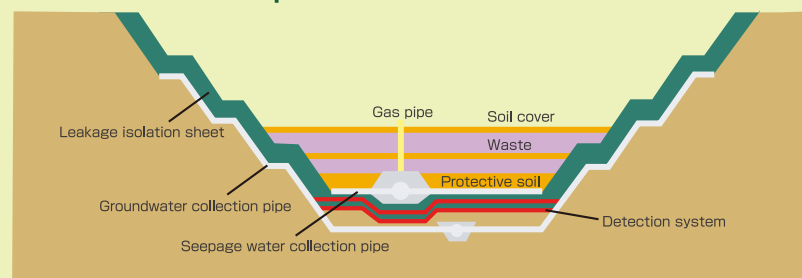


Leakage isolation structural plan (bottom slab section)

A system that detects leaking water through variations in current which flows between the top and bottom of the sheet using electrical wires lain 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: Baseball grounds (2)

Open space for sports (1; mainly for use as a soccer pitch), open space for sub-sports (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.



Baseball grounds



Open space for sports



Multi-purpose open space



Planting of trees through the "Local Greenery Project"



Open space with lawn