

## Semakau Offshore Landfill – Singapore's only operational landfill and the world's 'first-of-its-kind' offshore landfill constructed from the seabed

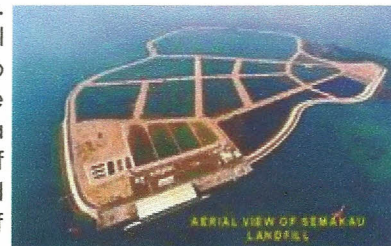
A unique, beautiful, clean and resort-like offshore landfill coexisting with vibrant marine ecosystem, mangroves, grassland and shoreline habitats, Semakau provides an educational yet fun and exciting outing unrivalled in other parts of Singapore with a vast shore ringed by mangroves surrounded by the largest sea grass meadows in Singapore.



**Southern side of the landfill**

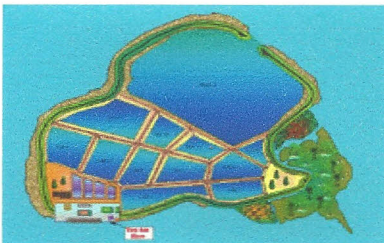
The sustainability of any country, especially for a small island-state like Singapore, begins with ensuring that physical land resources are not overwhelmed by the waste people generate. Currently, Singapore recycles about 44 percent of its waste. The remaining waste is sent either for incineration at one of the four incineration plants, or to the landfill site. Because of our limited land constraint, our government decided to build an offshore landfill site in 1995 enclosing a part of the sea off the southern islands of Pulau Semakau and Pulau Sakeng.

Semakau Landfill is Singapore's only landfill for waste disposal. It covers a total area of 350 hectares and has a landfill capacity of 63 million cubic metres. This landfill is expected to meet Singapore's need for landfill space till the year 2045. The supporting infrastructure for this offshore landfill includes a refuse transfer station at Tuas located on the western side of the island. Refuse is transferred into barges at this station and transported to Pulau Semakau. A large supporting fleet of transporters, barges, dump trucks, compactors, huge hydraulic excavators and large bulldozers are also required.



**Aerial view of Semakau Landfill**

When developing the landfill, care was taken to protect the marine ecosystem to ensure that the mangrove swamps and corals were left untouched. And the role of the 7 km confinement bund is to prevent any pollution of the sea surrounding the landfill site.



**Picture of Semakau Landfill cells.**

The challenge of waste disposal is not unique to Singapore alone, as countries around the world have expressed similar concerns as well. But in order to address this and turn things around, there must be determination on the part of every Singaporean and every person living here in Singapore, to cut down the amount of waste going into incineration and landfill sites. This strategy of minimizing waste and maximizing recycling is even more pertinent in the context of Singapore.

Semakau Landfill is a must see site on any environmental or geography trip. A wind turbine was recently installed in 2006 to study the possibility of harnessing renewable energy to power Singapore's southern islands.

In March 2008, **Starfish Learning Journey** was selected, appointed and trained by National Environment Agency (NEA) on waste management and to bring school groups to Semakau Landfill. Working with various agencies, our school programs are focused on our nation's efforts to overcome challenges towards achieving the goal of a Sustainable Singapore.

You may reach us @ **93864036** or email: [starfishlearningjourney@gmail.com](mailto:starfishlearningjourney@gmail.com). We look forward to welcoming you on our learning journey programs.



*Towards a Sustainable Singapore!*