

IDA AALBERG PARK

Haaga, Helsinki, Finland
Park restoration works

Key words:

construction of green areas, utilization of surplus soft soils and deep stabilized soft soils

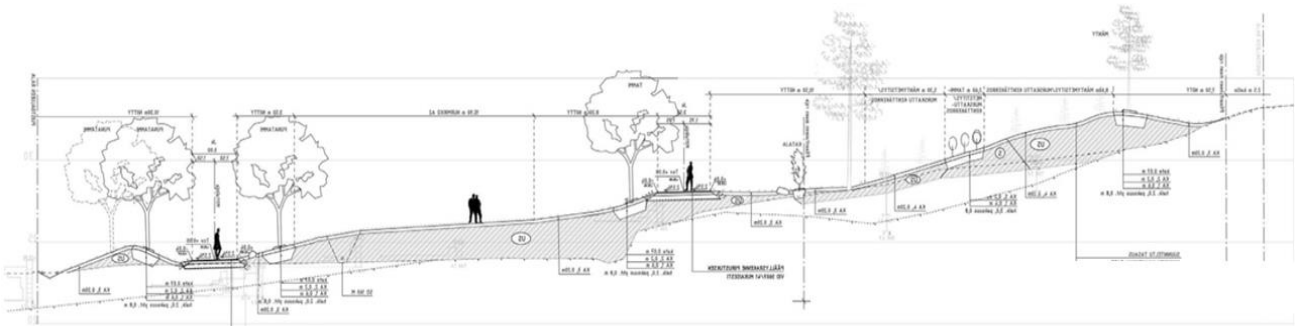
General information	The Ida Aalberg park was originally constructed in the 1960s and restored in 2011-2012. One of the areas in the park contained contaminated soils from a shooting range used in the 1920-1940s. The contaminated soil was excavated and transported to a landfill for contaminated soils ($\approx 2800 \text{ m}^3$). For the needs of filling the area and other landscaping purposes, surplus soils generated during various construction projects in Helsinki were used, e.g. column stabilized surplus clay excavated during pipeline works in the neighbouring street and dredged soft sediments mass stabilized in the Jätkäsaari basins (West Harbour). Bigger amount of column stabilised excavated soft soil was from neighbourhood working sites.
Advantages of stabilization	The landfilling of the geotechnically poor quality soils was prevented by utilizing them in landscaping a park. In addition, the use of virgin raw materials could be avoided.
Project timetable	2011-2012
Volumes and dimensions	Surplus soils used for landscaping purposes, $\approx 15\,000 \text{ m}^3$.
Geology and stabilized material	The park is located on a firm and non-settling rock and moraine ground. The water content of the Jätkäsaari dredged sediments before mass stabilization was approximately 30 - 160 %.
Target strength of the stabilized material	The target shear strength of mass stabilization about 50 kPa in Jätkäsaari basins. The target shear strength of the stabilised columns excavated from neighbourhood working sites is not known - typically it is 80 to 120 kPa.
Binder(s)	CEM II (Pluscement) 50 - 80 kg/m^3 in mass stabilization in Jätkäsaari basins.
Laboratory and field tests	Index properties and stabilization tests before mass stabilization of the-sediments in Jätkäsaari basins. Quality-control soundings after mass stabilization.
Other	-
Long-term follow-up and lessons learned	No follow-up measurements. Visual estimation based on the success of planted vegetation.
Sources	Nuotio, A-K. (2013): <i>Maaperän, ylijäämämaiden ja sivutuotteiden kestävä käyttö viherrakentamisessa</i> . Master's thesis. Aalto-University (in Finnish). Känkänen R. & co. (2014): <i>Helsingin kaupungin rakennusviraston merkittävimmät ympäristövaikutukset hankintojen ja suunnitteluohjeistuksen kehittämiseksi</i> . Report.
Stabilization contractor	Lemminkäinen Oy (stabilization of Jätkäsaari sediments), STARA (park construction)



Stabilized clay and other surplus soils from nearby construction sites were utilized in landscaping.



Picture of finished Ida Aalberg park (top) and cross section of park (below).



The plan of Ida Aalberg park. Partial copy of the area where surplus soils are utilized.