

References

S Group's logistics centre for utility items



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A new logistics centre is being build in Sipoo, Finland for S Group. One of the key factors for working centre is a big enough storm water system.

The foundation stone of the new logistic centre for the S Group, to be built in Sipoo, was laid in March 2010, and the centre is scheduled for completion during 2012. Ten times larger than the Finnish Parliament building and corresponding to approximately 2,350 detached family houses, the total floor space of the building will be 75,000 gross square metres and its gross capacity will total over one million cubic metres.

Project Facts:

Location
Sipoo, Finland

Completion
2012

Building Type
☒☒☒

Product systems
Potable water, Sewer Municipal,
Storm water

Project Type
New building

Partners

contractor
Maarakennusliike Lehtonen Oy

Almost all of the heating and cooling energy required by the logistics centre will be produced in a hybrid plant operated on renewable and zero-CO2 energy sources. Based on the use of geothermal energy and wood pellets, the plant will produce only 400 tonnes of carbon dioxide a year, while producing an equal amount of energy by district heat would result in 6,000 tonnes of carbon dioxide emissions a year. The hybrid plant is the largest geothermal energy facility implemented in Finland.

Large scale poses challenges

The main contractor of the earth construction work, Maarakennusliike Lehtonen Oy, began its work in November 2009 and handed over the task of main contractor to Lemminkäinen from the beginning of May 2010.

"We're responsible for the excavation, indoor and outdoor pipes, drainage and storm water gullies. The contract period is one year, so our share of the work will be completed in mid-December this year," Construction Manager Esa Hakkarainen of Maarakennusliike Lehtonen explains.

"In terms of scale, this is an extremely large individual project. The laid concrete alone will amount to approximately 6,000 m³. We'll install a total of 13 kilometres of indoor and outdoor drains and a similar length of electricity protection pipes. The number of wells, including cable manholes, totals 260.

"It's important for the client that the storm water gullies and pipes come from the same place to ensure the absolute reliability of joints. All products to be used were approved by the client in advance, and the approval was subject to the products having been documented and the necessary product data being available for them.

"Uponor has delivered in excess of two kilometres of 893/800 mm storm water pipe and approximately 200 wells to the site of the logistics centre. Sewerage will be implemented with the 200 mm Uponor Duplex sewer system and the water pipes with the 315 mm Uponor Profuse pressure pipe system.

"Uponor's references carried a lot of weight in the selection. All aspects in this project have functioned extremely well. I'm pleased that we can discuss things with just one supplier in this product area and that the same parts can be used in several locations. Our collaboration with Uponor goes back decades and we also have previous experience in major joint ventures, such as the Helsinki-Vantaa Airport.

"The project has progressed according to schedule, despite the harsh winter weather conditions this year. The cold weather did not hamper the progress too much, because all the pipes needed grooves to be excavated into the rock. The landfill material was well-compacted and the entire southern side was completed during the winter." "In a project of this scale, it's crucially important that deliveries are carried out on time. In this respect, we've had no problems with Uponor whatsoever," Supervisor Markku Tepsa of Maarakennus Lehtonen confirms.

At its busiest, the earth construction project has employed more than 80 men, including subcontractors.

The total investment for the Sipoo logistics centre is approximately EUR 150 million. After completion, the centre will provide employment for about 700 people. The employment effect during construction is several thousand person-years.

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