

WATER MANAGEMENT CASE STUDY

Company: Sand & Grus AB Jehander

Location: Löten, Sweden

Type of site: Sand and gravel pit

Potential impact on water or groundwater

In a part of an esker close to lake Mälaren, 50 km NE of Stockholm, Jehander blasts rock, excavates sand and gravel and the Ekerö municipality takes ground water for household use within the same pit area. The area is about 5 x 0,5 km and borders a Conservation Area, also a part of the esker. Most of the crushed rock, sand and gravel, about 400 000 tons a year, is transported by ship to the city of Stockholm.

Description of the good practice

The former esker has now, after more than 150 years excavation, the shape of small litters between a number of small lakes. A local beekeeper set his hives in different locations which contribute to pollination and rich vegetation. The biodiversity seems to be very high, about 5 red listed species have been found. Even larger birds such as osprey and fish hawk or animals such as elk and deer can be seen. The lakes attract people for bathing, fishing or just for relaxing. Round one of the lakes there is a track which is used for jogging in the summer and skiing in the winter.

At the same time, and for about ten years more, the production of aggregates will continue. The raw material is transported by trucks from the south part to the north part, where the processing plant and harbor are situated. Truck routes are separated from public areas.

Description of the positive effects on water/groundwater

The plant has been in the same area for more than 150 years. From the beginning only manual labour was used directly from esker to sailing schooner but gradually the work was done with more and more technical equipment. Round 1950 the “yellow machines” were introduced. Now you can feel the end of the excavation era.

The ground water level is at the same level as the lake Mälaren and they are like communicating vessels. Access to ground water is nearly total. 20 years ago Ekerö community was looking for a water source for the residents near Löten plant. After initial discussions they started drilling exploration and made a lot of chemical analyses and found that it should work. Since then they have taken out household water for up to 500 people, all the time with satisfactory water quality, only 50 m from the internal truck transport road (data control with Ekerö Technical Office showed that the aquifer since summer 2009 is a reserve water supply because of economical reasons). From Jehanders point of view those 20 years have been without problems.



*Union Européenne des Producteurs de Granulats
Europäischer Gesteinsverband
European Aggregates Association*

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