

The next steps:

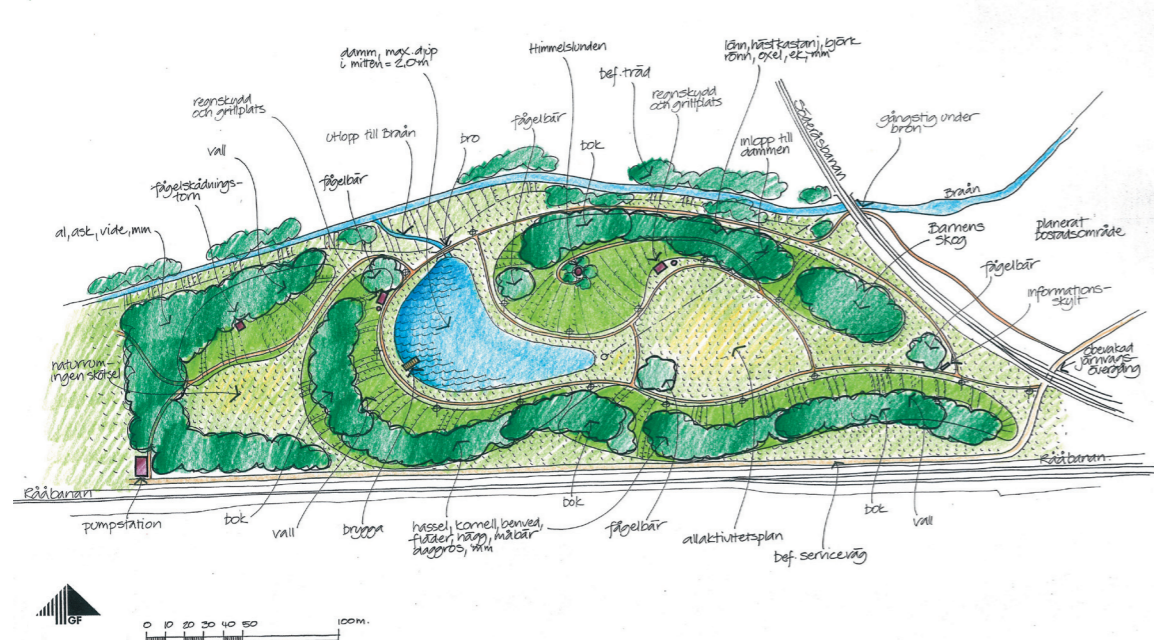
- Preparation of documents for Application of environmental permits.
- Application to SEPA for financing of the Final Phase.



The project has always been of interest to the press. It is also important that the information about the project is spread to others. To the left: Anna Söderquist, journalist at Landskronaposten. To the right: exhibition to the project site.

What will the future bring?

An important goal for the society is that the bad reputation and attitude toward the village will be changed. Teckomatorp should no longer be related to the scandal of BT Kemi. Therefore it is important that the project site will be reclaimed to something desired by the inhabitants. The Landscape architect Chris Delisle, GF Konsult in Göteborg, has proposed the future layout of the area (see map below). The work to turn the north area into a recreational area has also been tendered and is estimated to cost 7 million crowns. The cost of soil treatment is estimated to 40 million crowns. The south area will be further investigated and pollution expected to be found there taken away.



Svalöv municipality September 2006.

Conclusions:

- ❖ Psychology is an essential factor.
- ❖ Information to public must be open and free.
- ❖ Investigations should be directed towards possible final solutions as soon as possible.
- ❖ The involvement of authorities and politicians in the project has been very positive.

Time plan

May – Sept 2006	Application for financing
June 2006 – Aug 2007	Application of environmental permits.
Oct 2006 – Nov 2007	Works within the industrial site
Aug 2007 – Apr 2008	Treatment of polluted soil
Jan 2008 – Sep 2008	Soil works at site
Aug 2008 – Dec 2008	Plantings
Dec 2008 – Dec 2009	Site Management
June 2006 – Dec 2009	Environmental control
Jan 2006 – Apr 2009	Drainage system in work

Costs in the project

Measures	Costs in 1 000 €
Remediation 1976 - 1980	~ 3 000
Operation 1976 -	~ 1 000
Investigations 1980 - 2001	~ 1 000
Main study 2002 - 2004	~ 600
Preparation 2005 - 2006	1 500
Final Phase 2007 - 2008	9 000
Control and unforeseen events	3 400
Total cost for the society	20 000



BT Kemi Remediation

Executed and planned measures



Demolition of the factory, Febr. 22, 1979

Historical background

The company AB Bönnellyche and Thuröe – BT Kemi – had been manufacturing pesticides in the former sugar plant in Teckomatorp since 1965.

The inhabitants soon began reporting the leakage of chemicals into a nearby river and that the plant was emitting a nasty odour. This led various agencies to act to tighten environmental standards. The company at first was able to successfully circumvent and delay the implementation of these standards by exploiting weaknesses in the environmental legislation.

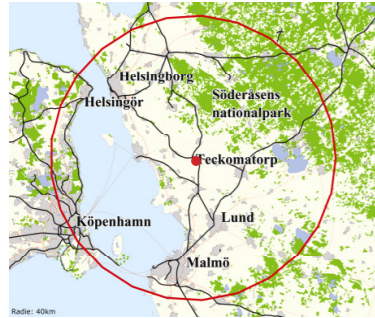
In the mid-1970s, a number of local residents started an environmental group in Teckomatorp as means of putting a stop to the pollution. After the discovery of approximately one hundred buried oil drums full of toxic waste material the level of publicity surrounding the plant increased during the autumn of 1975 and the all of 1976. The scandal culminated in the autumn of 1977 when the county council found additionally 600 drums filled with toxic waste in the area. The discovery of this waste gave rise to a powerful emotional response and was followed by several court cases and investigations.

The company went bankrupt and one of Sweden's - and Europe's - biggest environmental scandals in modern time was a fact. The factory was finally demolished in 1979, with the Government being forced to foot the bill for the decontamination of the factory site, which was not completely successful.

During the years up until today the question of a follow up treatment of the area been one of the County Administrative Board and Svalövs Municipality's top priorities.

What has happened since then?

Teckomatorp is situated in the south of Sweden, near Landskrona, Eslöv, and Lund and belongs to the municipality of Svalöv.



The project site is in the north limited by the river Braån and in the east by the railway to Svalöv. The project site is also divided in north and south by another railway between Malmö and Helsingborg. The southern area is about 4 hectares and this is where the factory was located. Today there are small industries and companies. The northern area is about 6 hectares and the site used for waste water treatment and dumping of the polluted waste.



The project site is situated west of Teckomatorp.

Project history

In 2002 the municipality and the government agreed to combine forces to remediate the site. The municipality would take responsibility for the project management of a "Main Study" and the government for founding. A project group and a board of directors of local politicians were put together. The "Main Study" was finalized in 2004.

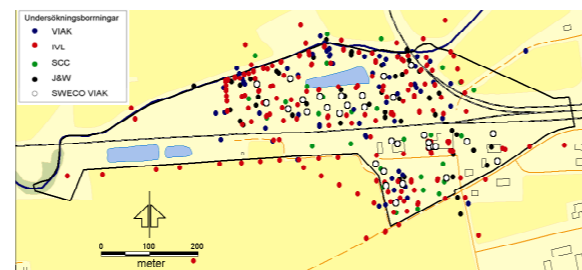
The project is supposed to be carried out according to the guidelines for remediation of contaminated areas by The National Environment Protection Board. It is also important to have a close dialogue with the County Administrative Board of Skåne.

In 2004 the municipality received further government subsidies for the "Preparatory Phase" for the final remediation. This phase was finalized in august 2006.

Project goals

Early in the project a few main goals were stated:

- The area should be of no danger to the surroundings after remediation and shall be efficiently used.
- The northern area should be used as a green area and the southern part for offices and small industries.
- Pumping of drainage water to Landskrona should cease.
- The remediation should be a good example for similar future projects.
- The project should be open for scientific research concerning environment, technology, health and social aspects.
- The attitude to Teckomatorp should no longer be connected to the BT Kemi scandal.

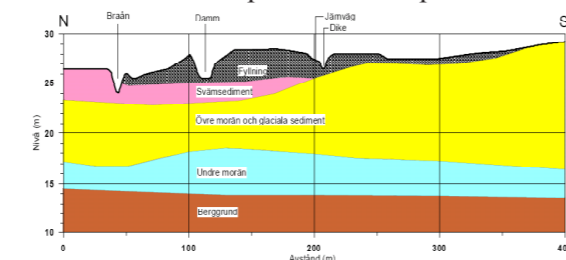


Soundings and analyses 1975-2004.

The main study

One of the first tasks in the project was to perform a main study, which would be the base for proposed measures. SWECO VIAK was engaged as main consultant and in 2004 the third and last version of the main study was finished. The main conclusions were:

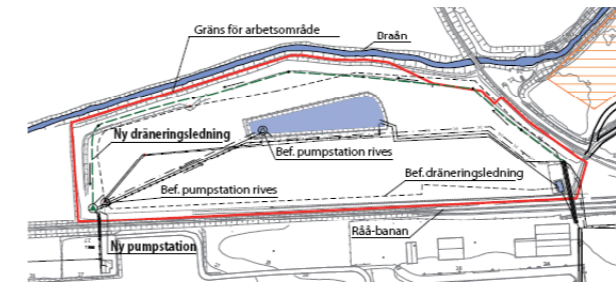
- There are still a great deal of pesticides left in the area. However 80% of the polluted soil is concentrated in five areas and 20% is spread all over the site.
- The main risk is the environmental risk for the river. Health hazard that may occur are mainly caused by odour when excavating the soil.
- Without pumping of drainage water to Landskrona the river would be heavily polluted.
- The technology and cost for cleaning the soil can only be decided based upon turnkey tenders from experienced companies.



A cross section through the area from the north to the south shows the principal geological structure.

New drainage system

In the end of 1970's a drainage system was built as a measure to prevent the polluted ground water to leak into the Bra River. The drainage water has ever since been pumped to the sewage treatment plant in Landskrona.



The map shows the position of the new drainage system next to the old system.

The old system was in bad condition and during 2005 a parallel system and a new pumping station was constructed in order to protect the river. The drainage system will be used during the remediation time.

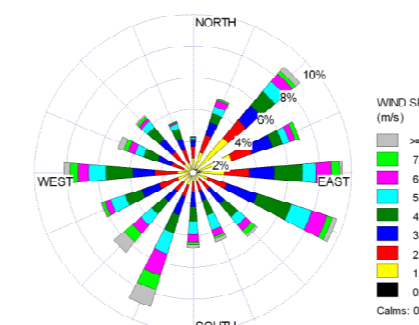
Weather station and odour testing

The polluted soil smells awful when excavated. While the site is decontaminated the smell in the village is depending on the direction of the wind. The experience from the works on the drainage system is that it smells very much on the site, but that it doesn't spread far.



Anita Olsson is testing the odour in a soil sample.

However a weather station was placed by the old sewage treatment work in the summer of 2005. It gathers observations about the weather like the wind, rain, air pressure etc in order to establish a meteorological model of the area.



Statistics from the weather station between 2005-07-26 and 2006-05-03.

Pre-qualification of contractors

In the spring of 2004 the municipality of Svalöv invited contractors within EU to pre-qualify for tendering for treatment of polluted soil. Nine contractors were given the possibility to give Tenders.

The tender documents were sent to the pre-qualified contractors in the autumn of 2005.

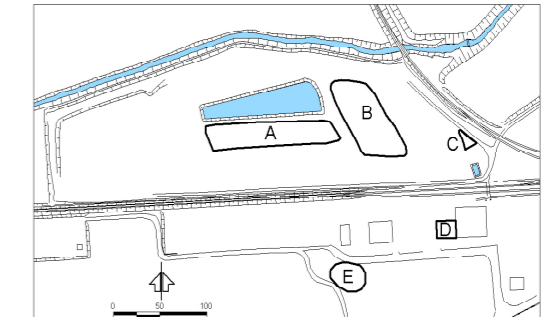
Twelve tender documents from four different contractors were received. In the spring of 2006 the board of directors decided to allot the contract to Skanska Sverige AB with RGS 90 Sverige AB as a subcontractor.



Collecting sample of polluted soil to contractors. Half masks were needed because of the odour.

Pollution

Considering the risks from environmental and health point of view, it would be satisfactory if 80% of the total pollution at the site would be eliminated and if the area would be covered with at least one metre of clean soil.



- A. Residues from sanitation 1978. 12 000 m³
- B. Process waste, polluted lime 12 000 m³
- C. Process waste, polluted lime 500 m³
- D. Polluted soil under floor 100 m³
- E. Polluted soil waste 500 m³

The map shows the five areas where the polluted soil is concentrated.

Poison Substance	Treatment result		Unit
	Desirable	Minimal level	
Chlorfenole	0,5	5	mg/kg DS
Phenoxiacids	0,05	1	mg/kg DS
Chlorocresoles	0,5	10	mg/kg DS
Dinoseb	0,05	0,1	mg/kg DS
Dioxin	100	400	ng TEQ/kg

DS - dry soil

TEQ - toxilogical equivalents