

Redesign of the soil conservation register BIS-BoKat: A “well-grounded” project thanks to Siempelkamp software

In May 2013 it was time for the “final acceptance” of a special Siempelkamp project in Rhineland-Palatinate: the Rhineland-Palatinate Landesamt für Umwelt, Wasserwirtschaft und Gewerbeaufsicht (short LUWG = State Office for the Environment, Water Management and Trade Supervision) commissioned NIS Ingenieurgesellschaft with the complete redesign of the BIS-BoKat soil conservation register. Through the use of modern technologies, an innovative online portal has been created that is functional, convenient and sustainable. How and why? This report reveals more...

by Winfried Vogt and Jörg Eckelmann

Land area used for military purposes in Rhineland-Palatinate with potential old deposits



One of the core tasks of the LUWG consists in recording old deposits and abandoned sites such as land used by the military, which might have to be classified as areas suspected to be contaminated – as stipulated by the State Soil Protection Act.

The Rhineland-Palatinate history involves one aspect which makes the use of the LUWG particularly important: this federal state is one of those in the whole of Germany which has the most military sites of various forces – e.g., the German armed forces (Bundeswehr), the US Army or the French forces.

There is a need for action here, since due to structural changes, increasing numbers of military bases are being closed. The consequence: land previously used for military purposes is being transferred – i.e., converted – to civilian use. “This is a considerable challenge for the local communities concerned. It has to be clarified whether the area to be converted is free of contamination, i.e., free of old oils from former fuel depots, workshop oils or former disposal sites containing various substances. Because only then the area can be quickly converted to civil use,” explains Winfried Vogt, head of the DP specialist applications division for waste management and soil protection in Rhineland-Palatinate.

LUWG: broad-based search for evidence

This is where the LUWG comes into play: The authority records not only abandoned commercial and industrial sites, but also the military properties. The collected data relates to environmentally relevant forms of use and any applicable cases of damage.

In order to differentiate possible further risk research or redevelopment measures in the subsequent evaluation, the documentation of all collected data is stated in attribute and graphics data.

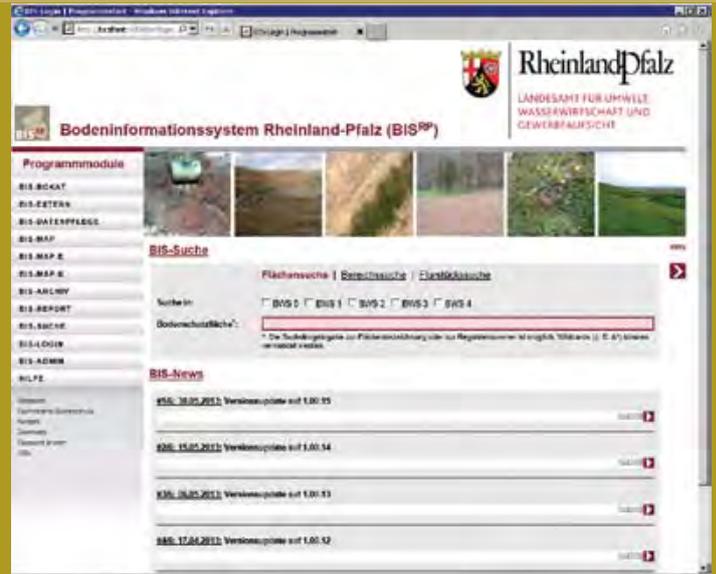


Civilian use of land previously used for military purposes

Demolition of former military buildings, e. g., residential buildings, fuel depots



Start screen BIS-BoKat



Each of these sites, old deposits or commercial areas concerned corresponds to a so-called data collection area, which covers the entire region under study. These data collection areas are divided up in turn into areas of use. The characteristic feature of these partial areas is that they have been subjected to standardized use over a specific period (e.g., as a gas station, workshop or blasting area).

Rhineland-Palatinate soil conservation register: getting to the point with Siempelkamp

Assistance with the complex task of recording and evaluating the suspected contaminated areas is provided by the electronic Bodeninformationssystem Rheinland-Pfalz (short BISRP = soil information system of Rhineland-Palatinate): this tool manages the datasets available within the state relating to soil protection. The system consists of six specialist modules defined in the State Soil Protection Act, including the soil conservation register module. This pools data, facts and findings about the suspected contaminated areas collected during the investigation, evaluation and remediation.

In November 2011 the LUWG commissioned Siempelkamp with the complete modernization of the BISRP soil conservation register, making use of competent and professional support for the redesign of the "BIS-BoKat" module: Siempelkamp NIS Ingenieurgesellschaft has been successfully established on the market for many years with services associated with the compilation and maintenance of database-driven information systems. "Our services include in particular high-performance process data systems for the nuclear and conventional power plant field, as well as highly specialized environmental information systems. This

profile matched the requirements associated with BIS-BoKat," says Holger Heidenbluth, BIS-BoKat project manager and software developer.

For one year a team of developers, occasionally seven-strong, worked on implementing the project. With the help of modern technologies, the Siempelkamp experts expanded the soil conservation register into a contemporary internet portal. One of the challenges was to harmonize the appearance of an internet application that is characterized by modern web pages with the structured working routines and high functional requirements during the collection and evaluation of data for suspected contaminated sites.

This was successfully implemented; the combination of a visually attractive program system and the high degree of technical and functional practicability has been achieved. The LUWG confirmed the final acceptance in May 2013. After a successful trial run over three months and a user training, the system was put into operation in the production process on September 24, 2013. "During the trial run, all of the data was recorded in parallel mode. Siempelkamp's performance impressed due to the time savings, convenience and ergonomics," states Winfried Vogt, divisional head of the state of Rhineland-Palatinate.

From the water to the soil...

With the BIS-BoKat soil conservation register, Siempelkamp has already successfully completed the second project for the Rhineland-Palatinate State Office for the Environment, Water Management and Trade Supervision. The compilation and maintenance of the drinking water information system TWIST (as reported in Bulletin 1/2011) has already been a milestone which allows Siempelkamp to look back on a successful long-term collaboration with the LUWG.