

BioSealing JIP launched

The Biosealing Joint Industry Project (JIP), in which Deltares will team up with eight companies, has been officially launched. The parties will invest a total of €400,000 to investigate BioSealing further and to initiate a number of field projects. GEOtest became a member of consortium. BioSealing is the sustainable and cheap alternative for sealing underground leaks in, for example, tunnels, building pits and car parks, but also for treatment of seepage through dikes and dams. In addition to traditional methods for sealing leaks on-site, such as grout or chemical injections, BioSealing offers a method less expensive and far less burdensome for the environment.

BioSealing in practice

BioSealing was initially developed by Deltares and Volker Staal Funderingen. The technology involves injecting certain nutrients close to a suspected underground leak to stimulate the growth of soil bacteria, resulting in a major reduction in the permeability of the soil and gradually sealing off the leak.

Research

BioSealing has already been used in practice on several projects, for example to seal a leak in the North/South metro line in Amsterdam, and by Züblin Spezialtiefbau at a dam in the Danube in Austria. So it has been proven that the concept works.

But there are still some unanswered questions and these will be addressed by the BioSealing JIP. The research will include an assessment of the durability of BioSealing and an examination of possible improvements to the process. It will be conducted at the Deltares Environmental Laboratory in Utrecht, and involves a team of Austrian and Dutch researchers from Zuckerforschung Tulln and Bioclear.

New projects

The companies involved in the JIP will also be launching new field projects so that the technology can be used more widely, making it possible to acquire more field experience. Projects will be organised in the Czech Republic (by GEOtest) and in the Netherlands (by VSF). The basic materials required will be supplied by Sireg and Avebe. These projects will be extensively monitored by, for example, Texplor in order to validate the Deltares laboratory research.

Participants

Currently, the parties in the BioSealing JIP are: Sireg (Italy), Zuckerforschung Tulln (Austria), Bioclear (Netherlands), Texplor (Benelux), Avebe (Netherlands), Züblin Spezialtiefbau (Austria), Volker Staal en Funderingen (VSF) (Netherlands), GEOtest (Czech Republic) and Deltares (Netherlands). Other participants may join later.

