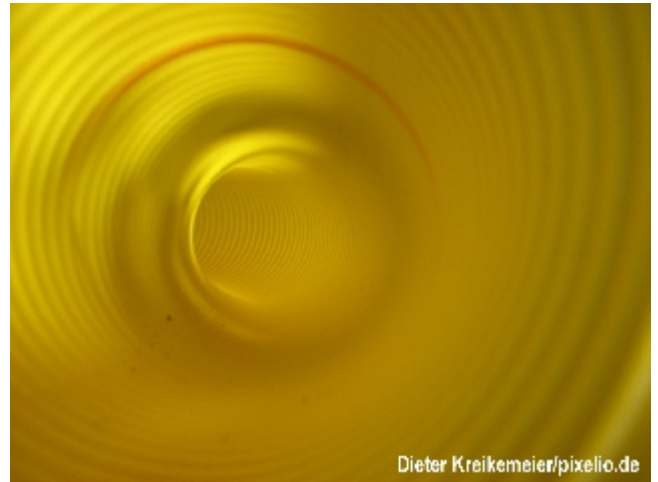


# Project F234:

## Installation, operation and maintenance of central water-drainage systems

Groundwater management in the Emscher region has increasingly gained in importance in recent years in view, in particular, of rises in the groundwater table caused by drain/sewer refurbishing projects and the influence of mining activities. Such rises in the groundwater table can result in widespread effects on structures and sites in the affected region, and thus harbour significant potentials for conflicts. It may therefore be necessary, depending on the local (and, in particular, on the local hydrogeological) situation to limit the upward movement of the groundwater table.



So-called “central drainage systems” are one solution option which is in use for groundwater management in the Emscher region. These are installed at a corresponding depth in the soil and assure maintenance of a “zero-conflict” groundwater table across a large area, after refurbishing of the public drain/sewer system.

There is, at present, a need for determination of the extent to which certain factors (such as ochering, depositions and root infiltration, for example) critically influence service-lives and maintenance requirements, and the engineering and operational provisions necessary to assure the long-term functioning of such systems. The aim of this study is that of

providing a well-founded overview of practical experience in this field, defining the current state-of-the-art, and publicising the latest scientific discoveries. Analogous experience from construction and operation, and also from the regeneration and refurbishing of wells, and of horizontal wells, in particular, are also to be analysed and evaluated in the context of this study.

## **Project title**

“The installation, operation and maintenance of central water-drainage systems – Practical experience, state-of-the-art, and scientific findings (study)”

## **Project management**

IKT - Institute for Underground Infrastructure

## **Project participants**

Bieske und Partner Beratende Ingenieure GmbH (Prof. Dr. habil. Christoph Treskatis) engineering consultancy

## **Client**

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