

# **Water and Soil in a Former Industrial Region – or Shaping the Future in Sustainability**

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## **Key words:**

## **ABSTRACT**

What are the taskforces for management in a 100 year old industrial agglomeration area? Are there comfortable skills to balance the ecological and economical powers ? What is the role of landscape culture and citizens identity? Is there a consense with the inhabitants of the cities? Is it possible to transfer the measurement-procedures into other regions and countries? The questions will be answered by presenting examples from the different fields of Urban regeneration. There will be a powerful demonstration of surveyors responsibility for such matters.

Depending on the framework conditions in Germany the contribution will give a comparison with some other countries in Europe and close with an outlook and recommendations for future work.

## **ZUSAMMENFASSUNG**

Was sind die Aufgaben für das Management in einem 100 Jahre alten industriellen Ballungsraum? Gibt es benutzbare Werkzeuge um die ökologischen und ökonomischen Kräfte auszugleichen? Was ist die Aufgabe einer Landschaftskultur und bürgerschaftlicher Identität? Gibt es eine Übereinstimmung mit den Bewohners der Städte? Ist es möglich die Verfahrensschritte auf andere Regionen und Ländern zu übertragen?

Die Fragen werden beantwortet durch Präsentation von Beispielen aus den verschiedenen Bereichen städtischer Erneuerung. Dabei gibt es eine gewichtige Demonstration der Verantwortlichkeit von Geodäten für diese Aufgaben.

Aufbauend auf den Rahmenbedingungen in Deutschland wird ein Vergleich mit anderen Ländner in Europa unternommen. Der Beitrag schließt mit einem Ausblick und Empfehlungen für die zukünftige Arbeit.

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## **INTRODUCTION**

In regard to the headline of this session 8.5 URBAN REGENERATION AND ENVIRONMENT I want to introduce to you a groundwater and rainwater management system as consequence of mining hard coal from coalmines as well as methods to handle with soilissues out of the same production line in Ruhrdistrict of central Germany.

## **A SHORT HISTORICAL REVIEW AND IMPORTANCE FOR THE PEOPLE**

As ever before in the last hundred years coalmining is a very important economical factor in the Ruhrdistrict. About 30 000 employers are directly working at coal companies in the whole area. In a series of pictures I show the volume, the time schedule and influencing conditions to soil and water as result of exploring, planning and capturing coal from the very deep underground.

By the way all the works are well done planned by surveyors mostly integrated into working groups mixed up with geologists, ecologists, landscape-planners and specialists for water-facilities and hydrography under the moderation of authorities from the local governmental bodies.

In the past there was a much more industrial thinking of managing soil and water in this area in a way of robbery. As you can see out of the examples responsible people were only seeing to it that soil and water couldn't bring damage to the areas in a simple way.

Nowadays it is a very complicate system for removing soil and water with an own philosophy and sustainability for the future in this region.

## **MANAGING GROUNDLEVEL AND RAINWATER**

The big goal for the whole region is to renature a totally wasted riversystem into a new revitalized river- and landscape. This happen in my city during producing coal with the issue that the groundlevel is going down more and more until the measure of maximum 11 meters in the year 2019.

Out of this spectrum and with this background I will show to you examples, how and where we manage the ground water level and a system of small tributaries of the mainstream river Emscher.

The basic principle for all these projects is to separate the dirty and waste water out of all using facilities from the rain (clear) water and to bring it into a tube below the surface to

transport the waste water to a cleaning station and then to let it back into the mainstreaming river Emscher with qualities as clear water.

The rain (clear) water and the ground water will be managed into a system of regulated courses sometimes not in the old directions and situations but regarding to the possibilities of the gravity in new places building up a new landscape.

## **MANAGING STONEWASTE AND SOIL BY COALPRODUCTION**

As ever before it is a fact that there is no chance to replace stonewaste of the produced coal under the surface of the factories. Therefore we have a lot of small artificial mountains in our landscape.

In the past they were to see from the far as dirty and ugly mountains without growing green or possibilities for peoples activities. The mountains were closed and forbidden areas.

Today the philosophy has changed and these places are places of high activities. You can walk or bike mostly everywhere in a networksystem of ways and pathes combined with a network of cultural, historical or sporting activities.

## **CONCLUSIONS**

What is to learn from my very few remarks?

1. Industrial times in industrial areas are changing radically.
2. Producing methods are changing regarding to the will of the people. This matter of course is well known but you have always to fight for it.
3. People become more and more responsible and can do a lot for sustainable nature in a high standart of industrial areas
4. People have to think and plan before they start to invest in new productions. In most of economical developement procedures people start to catch the values of produce and serve for the issues afterwards.
5. In a good understanding surveyors have to help and change the minds for a better sustainability for the future of landscape.

The remarks will be accompanied by a powerpoint presentation containing a lot of datas and facts about industrial developement and planning methods to implement such described projects.