

A New Railway Station in the Central Part of the Former City Landfill - Geotechnical Challenge in the Urban Development of Belgrade, Yugoslavia

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The design of Karaburma new railway station in the north part of Belgrade was some kind of geotechnical challenge. The complete station plateau was located in the central zone of the former city landfill. Beside other geotechnical activities, specially designed and implemented hydrogeological investigations preceded the construction as a response to the contractor's request to design temporary system of infiltration wells for evacuating all atmospheric waters from the station plateau.

The investigations themselves were so designed as to reliably and in a modern way enable determination of the main hydrogeological parameters for the complicated area, definition of nature and optimum number and technical characteristics of the drainage system and structures, finding the way how to achieve the rational operation and revitalization of all infiltration wells and give a quality forecast of the system operation during the construction works. All this had to be coordinated with a precise schedule of construction bearing in mind a potential geo-ecological impact upon the stability of ground and structure in the wide area to be covered by the project with a city center in the vicinity.

This paper shows a modern approach to hydrogeological-hydrodynamic investigations, their objective being to define a rational system of infiltration wells for evacuating atmospheric waters to landfill body as a temporary drainage system for the whole time of the railway station construction.