

# Gas Emission/Access Road Assessment - Bourj Hammoud Dumpsite

The staff of EDESSA was retained by AVERDA GROUP to assess the quality of the main site access roads and provide recommendations for upgrade where necessary and to conduct a gas emission assessment of the landfill, by installing monitoring wells.

This site assessment was conducted in order to study the possibility of developing 4 recreational areas on the landfill.

The qualitative status of each access road was assessed by conducting visual surface inspections, in-situ density and moisture testing using an MC-1DR-P PORTAPROBE Nuclear Density/Moisture Gauge, and trial pit investigations using a JCB type wheeled excavator equipped with ditching and dozing buckets.

The gas survey works included the drilling of four wells to 10m depth and the sampling of these wells and an existing well located in the southern part of the top plateau.

As a result of the technical part of the study: four gas wells were installed, 25 gas samples were collected and analyzed, 28 trial pits were excavated and 53 in-situ density tests were conducted.

All site access roads assessed appeared to have a solid foundation of densely consolidated demolition and hardcore materials. The gas survey show an extreme slowdown of biodegradation inside the landfill and the inability of any landfill gas to go through the cap material installed in 1997.

As such, the development of activities on-site could be achieved with minimum impacts to human health and the environment. This type of investment is beneficial on both environmental and social sides. It will allow the use of an abandoned land to create useful and necessary developments for the society.

