

**Converting
Wastewater
to Irrigation Water**

MBR Package Plant

GERMAN EMBASSY KABUL, AFGHANISTAN



Bundesrepublik Deutschland
Auswärtiges Amt

This project at the German embassy in Kabul was executed under extremely challenging boundary conditions (space and security restrictions, risk of terrorist attacks, climatic variations). Since the facilities of the embassy are not connected to any kind of sewage system, a stand-alone solution from MENA-Water now performs the wastewater treatment directly on site.

With the efficient small footprint of the MENA-Water MBR package plant design it was feasible to preserve most of the location's garden court. Furthermore a reed bed for receiving the excess sludge from the plant has been integrated in the garden area.

Wastewater is treated via two containerized membrane filtration plants (each having a max. capacity of 25 m³/d) following one common underground biological aeration tank. The clean effluent water is drained in the garden via infiltration system.

MENA-Water was in charge of planning and realization of all works including the required civil constructions. Technical installation was executed in the second half of year 2014 and the plant has been commissioned and handed-over to the Ministry of Foreign Affairs at the beginning of 2015.

For the initial operation period MENA-Water is involved in supervision and maintenance for the plant, having signed a two years' service contract with the end customer.



PROJECT SCOPE

- 2 MBR package plants (capacity 25 m³/d each)
- Equipment for pre-treatment and biological aeration
- Civil works for underground channels and basins
- Effluent infiltration system
- Reed bed for sludge treatment

