



**Country**  
Qatar

**Client**  
Electrowatt and GLF

**Date**  
2000-2002

**Cost of works**  
€200m

**Sogreah's services**  
■ Design Services

#### Description / Particularities

- Common intake for all plants in the Ras Laffan industrial area;
- Sized for a discharge of 250 m<sup>3</sup>/s;
- Dredged channel 300 m wide protected by two offshore breakwaters 1600 and 1400 m long;
- No risk of recirculation accepted;
- Sensitive area from the coastal environment standpoint.

#### Detailed services

*For Electrowatt:*

- Investigation of the best layout based on 3D hydrodynamic modelling;
- Impact on the environment and on coastal stability;
- Preliminary design and tender documents for the intake and outfall structures.

*For GLF:*

- Dispersal of the thermal plume by 3D hydrodynamic modelling
- Study of wave disturbance inside the basin;
- Checking of structure stability on a 3D physical scale model.