



Country

France

Client

DPAM 2000 consortium
(Vinci, DEME)

Date

2002-2005

Cost of works

€324m

Sogreah's services

- Design services for the consortium

Description / Particularities

- 6000 m long protective breakwaters (32,000 armour blocks placed);
- Two 13,000 t caisson-roundheads (55 m long, 20 m wide and 28 m high);
- Breakwaters surrounding the reclamation area totalling 4000 m;
- Volume of dredging in the access channel (l = 9000 m) and basin (l = 4200 m) dredged to -15 m: 50 million cubic metres of mud, sand and gravel.

Detailed services:

- Validation of the alternative presented by the consortium;
- Definition of wave climate offshore and on site;
- Desk study of the stability of the protective structures under wave attack;
- 3D scale model study of the stability of the western and southern breakwaters;
- Study of construction phases and in particular the closure of the tidal basins;
- Working design for the two caisson-roundheads;
- Technical assistance on site as requested;
- Partnership with the Owner and contractor concerning the construction of 10 km of breakwater foundation made of gravel quarry run including in situ monitoring, numerical and scale modelling;
- Study of sedimentation on site.