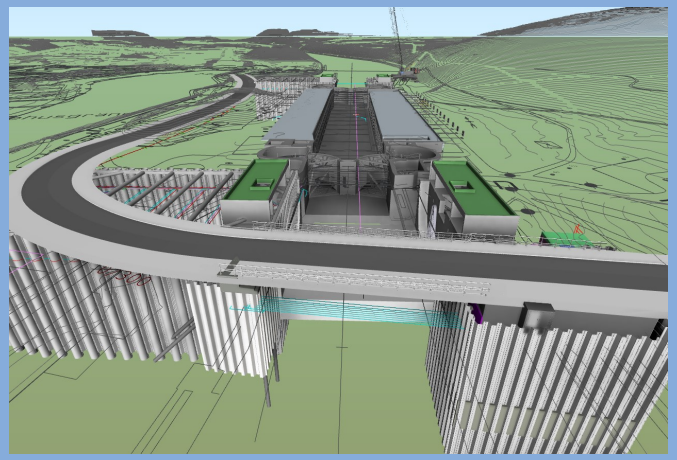
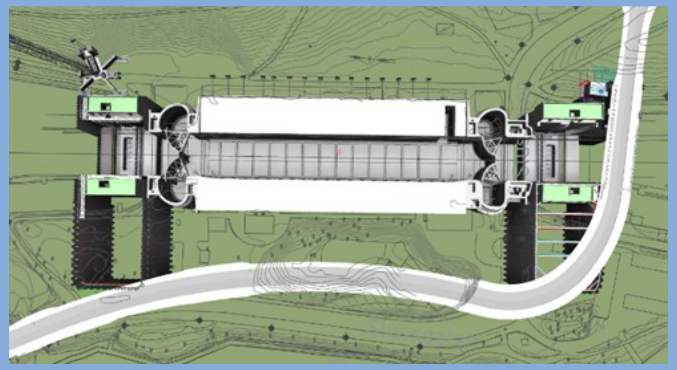
Civil Engineering & Infra

Field of expertise: Offshore engineering, special equipment

Client: Züblin Scandinavia AB





mhpoly
consultants engineers

Lock at Södertälje

About the project

Situated between Lake Malaren in Sweden and the Baltic sea, is the ship lock in Södertälje Canal which was originally built in 1819. To meet the increase in maritime traffic and growing ship sizes, a project was commissioned in 2016 to lengthen and widen the existing lock to 170m and 25.3m respectively. The renewal project also included the construction of two new lock heads, replacement of the lock gates and constructing a new bascule bridge. The main challenge of the project was to minimize the impact on maritime traffic during construction.

Project activities:

- Winning tender design with alternative designs
- Preliminary design and concept development based on the design base.
- Design calculations:
  - Basic and detail design calculations of the lock head concrete structure including reinforcement;
  - Basic and detail design of the steel lock gates including hydraulic analysis;
  - Bascule bridge and abutments design;
  - Preliminary and detail design of alternative methods of relocating the lockheads into the canal (skidding and floating)
- Drawings:
  - Plan overviews;
  - Construction details and cross-sections;
  - 3D-animations;
- Reports: Design basis, sustainability report, drawing explanation guides, construction planning;
- Risk analyses for construction methods, for chosen structural parts, alternative foundation choices etc.