

Lowestoft South Beach Coast Protection Improvement Works

Concept design for seawall toe protection and reinstatement of historic spiral access ramp

Lowestoft, UK



The failing Flag Pole Ramp

Client: Waveney District Council (WDC)

Services provided:

- concept design
- geotechnical stability analysis
- wheel chair requirements
- geometric design
- heritage considerations
- consultation on buildability

ENBE was appointed by WDC to prepare a concept design for toe protection to the existing seawall including reinstatement of a Victorian spiral ramp (the Flag Pole Ramp) that provided access to the amenity beach. Both structures were at risk of failure due to reduced beach levels and were suffering from undermining.

The concept design to improve seawall stability consisted of the provision of a concrete apron and toe piling at the base of the existing seawall. The ramp structure was more complex: as it was a listed structure, WDC was required to reinstate the ramp with a flint cobble finish to match the adjacent seawall; to enable safe wheelchair access the reinstated ramp needed to have a slacker slope than its predecessor; importantly, the new ramp had to survive falling beach levels. ENBE developed the complex 3D geometry and produced a concept design that adhered to the Council's requirements in terms of technical performance and heritage criteria. However, a change in circumstances meant that the works to the ramp were no longer necessary

“ENBE provided effective concept design and ECI support services to the Council on this scheme. They fully embraced the challenges of extending the life of a 130 year old erosion defence, with a local conservation designation, and helped to deliver a good outcome.”

Paul Patterson/ Coastal Engineer, Waveney District Council