



## Case study

# Land reclamation & dyke construction

Reuse GmbH



## Scope of work

Reuse GmbH, a civil engineering company specialising in coastal protection completes substantial dyke reconstruction project in Büsum, Germany. The sandy beach island 'Perlebucht' was raised from 1.6m up to 5.0m in order to withstand the summer storm floods. During this Reuse GmbH moved and placed 77,000 m<sup>3</sup> of material.

In order to achieve the contract requirements, Prolec's Digmaster Pro 3D GPS machine control was used. This ensured a high level of accuracy was maintained throughout the project plus increased productivity compared with more manual methods.

Stainless steel marine grade sensors were used in this project due to their ability to operate in the harsh salt water environment. Alongside this, Reuse GmbH required the real time location of the grad-flo pump to just 10mm accuracy. The proprietary "grad-flo" pump was modelled and input to the software. This meant the driver could see the tool in real time adding further to the productivity benefits of the system.

The ability to not only import the target, but also the current design file, enabled the operator to determine where the material still needed to be removed. By utilising a 2D topographical map, laid on top of the design file along with the integrated progress map, made the task simple and efficient. The progress map also allowed for the recording of the daily output as evidence to the contractor.

All personnel involved in the use of the system said that they could notice the productivity enhancement almost immediately.

## Benefits delivered

- High productivity and lower fuel usage
- Right first time cut and fill
- Verification of design to as built
- Real time display of dragg flow position
- Accurate first time dredging (Better than 10cm accuracy)
- Real time progress map
- Export "as built" data

## Equipment provided

- Digmaster Pro 3D machine guidance software
- Tool design and display
- Marine grade CANBus sensors
- Productivity data logging

## Summary

Reuse GmbH opt for Prolec's Digmaster Pro in conjunction with a grad-flow pump for dyke construction in Germany