

TAUW

COMPANY STORY

by Renate van Bemmelen, advisor, BU living environment

A NEW WAY OF DIKE REINFORCEMENT

Tauw started in 2019 with reinforcing 7,5 kilometer dike in the city of Zwolle ('City Dikes Zwolle'). The project is a collaboration of the 'Dijkzone Alliantie Zwolle' with the Water Authority Drents Overijsselse Delta (WDO Delta). One of the first projects for which the tender was not awarded based on submission of the lowest bid. A more important factor played a role!

DIKES ACROSS THE CITY

One of the projects for the Flood Protection Program (Hoogwaterbeschermingsprogramma, HWBP) are the dikes in the city of Zwolle. More specifically, for dike-section 53-3 around 7,5 kilometer of the dikes need to rise with about one meter and the rest of dike-section needs to be strengthened. Technically not a complicated task, but certainly challenging because of the different uses of the surrounding landscape (urban area, an industrial area and natural reserve Natura2000).

Starting point of the dike is the east bank of the Zwolle-IJssel canal and the Zwarte Water river, and continues from the Spooldersluis to the mouth of the Vecht river. The dike runs along a storage of gasoline and the Scania factory in the industrial area Voorst. It passes the district of Holtenbroek, where buildings are located close to the dike, after which it comes across a nature reserve Westerveld in the northern rural area.

UNIQUE JOINT VENTURE

The Water Authority was searching for the most suitable team to come up with the best solution for the city dikes in order to overcome traditional risks. This led to a special tendering process and project contract with an open financial account. Main award criteria were quality and joint venture. Price played a minimal role in the tendering process. Price formation took place after awarding of the project was completed, and in close collaboration with the Water Authority. This innovative form of tendering has led to a mix of Best-Value Procurement, Alliance and Project/Construction Team.

The 'Dijkzone Alliantie' consists of the contractors Ploegam, Dura Vermeer and partners Fugro, H+N+S and Tauw. These are strategic partners for already seven years in water safety projects like 'Ruimte voor de Waal', several area development projects, and now the 'City Dikes Zwolle'. Together with its partners Tauw takes the first step of the plan development phase of this unique project within the HWBP. Tauw leads the technical and environmental aspects of this dike reinforcement project. A lot of stakeholders are involved in the project, like the Water Authority, municipality, several companies and local residents. The design of Tauw takes place in close consultation with the stakeholders.



LISA'S WORK AS A FLOOD CONTROL ENGINEER

Our engineers, advisors, designers, technical specialists work on the technical and spatial design of the dike. Lisa de Gee is one of the flood control engineers working on this dike design. Lisa: "In my job I am actively involved in the implementation of innovative reinforcement techniques for the design. A trade-off-matrix between various aspects, such as manageability and reliability, led to a short list of innovations that we will investigate further. Hopefully, the implementation of one or more innovations will lead to a reduction in costs. For me it is an very interesting way to make a contribution like this to a project of this kind!"

FIELD RESEARCH

Apart from the technical aspects licensing procedures (like Projectplan Waterwet), the conditioning research and the stakeholder process, need to be managed. This is done by the environmental management and conditioning group of Tauw.

As we write this article, research on soil, groundwater, unexploded ordnance, archeological survey and nature research is being conducted. The Preferred Alternative (Voorkeursalternatief, VKA) of the dike reinforcement is now translated into a design which will be discussed with the stakeholders. Finally the design will be constructed in 2024.

GET IN TOUCH!

Read and learn more about our ingenuity to make the Dutch dikes great again on [Tauw.com](https://www.tauw.com). Also read more about our internships and graduation. Tauw is looking for enthusiastic colleagues and students. For more information and application go to: [Tauw.com/careers](https://www.tauw.com/careers) or [werkenbijtauw.nl](https://www.werkenbijtauw.nl).