

## DELTA WORKS 2.0

### “Dike Park”

This regional design project for the urban landscape joining Arnhem and Nijmegen takes its cue from the flood bypass planned by the department of waterways and public works to counter the threat of peak discharges from the Rijn and Waal rivers. This planned bypass is expected to fill completely every 20 to 40 years with excess water from the rivers. Delta Works 2.0 seeks to advantage this civil engineering task in spatial terms and maximize its significance for the Arnhem-Nijmegen urban network.

The bypass secures an impressive expanse of 3000 ha in contrast with the surrounding small-scale urban tapestry. Its containing embankment is a landscape park 42 km long and with an average width of 200 m. This dike-park is the new front for urban developments in the Over-Betuwe region and new programmes will be oriented to it. Many people will make their home along this park, unique as it is in its grandeur and linearity. A dense cover of 50,000 elms presents a majestic surround to the void of the flood bypass. This elm cathedral provides a sheltered environment for the park and reflects the seasons to spectacular effect. The route followed by the dike-park is carefully aligned to landmark buildings in Over-Betuwe; visitors are never without a church or castle in sight. The standard park section responds to local activities, generating a wide spectrum of ambiances, spaces and potentialities. Horticulture, for example, requires an extra wide reed marsh for water purification, whereas in residential areas the rows of trees open up to create attractive areas of open parkland. The closable openings in the dike are designed as lines of connectivity through the park and as prominent entries to the flood bypass. The broad asphalt expanses of the overflow channels double as oases for recreational activity in the dike-park. Roman archaeological sites provide landscaped ‘atolls’ in the void of the bypass. In this idyllic inner world of country houses and standard orchards behind a six-metre-high dike, time seems to stand still. That said, the solid materiality of the structural works is a constant reminder of the dangers of flooding.

Absolute emptiness is a natural prerequisite for a flood bypass to function fully. The land use must be able to cope with powerful water flows yet offer little resistance; it must be capable of sustaining an inundation lasting 20 days. How the land is used is of lesser importance in developing the dike-park. This is why I have given a wide range of options for fitting out the site rather than choosing one duty for it to perform. The preferred options are those that require a great expanse to work well. An example that sits well with the experiments of the electric power station at Nijmegen is the production of biomass from elephant grass. In that case the flood bypass could produce two to three per cent of the total Dutch energy production.